

Exhibit 1

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

In re Global Brokerage, Inc. f/k/a FXCM Inc.
Securities Litigation

Master File No. 1: 17-cv-00916
(RA)(BCM)

This Document Relates To: All Actions

REPORT ON LOSS CAUSATION AND DAMAGES
BY DR. ADAM WERNER

April 21, 2021

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SCOPE OF PROJECT AND DECLARATION

1. In my expert report dated January 6, 2020 (“Werner Report”), I examined factors that are generally accepted by courts as indicative of the efficiency of the market in which a security trades. Based on my analysis of those factors, I concluded that Global Brokerage, Inc., f/k/a FXCM Inc. (“FXCM” or the “Company”)¹ common stock and the FXCM 2.25% Convertible Senior Notes due 2018 (“FXCM Notes”) traded in efficient markets during the periods from March 15, 2012 through February 6, 2017 (the “Class Period”), and June 24, 2014 through February 6, 2017 (the “Notes Period”), respectively.

2. In the Werner Report, I showed that each of the *Cammer* and *Krogman* factors supports a finding that FXCM common stock and FXCM’s Notes (collectively, “FXCM Securities”) traded in efficient markets throughout the Class Period. I further demonstrated, through event study analysis, that the FXCM Securities reacted to new Company-specific information as it entered the market.

3. Following the Werner Report, I was asked by Lead Counsel for the Plaintiffs, The Rosen Law Firm P.A. to consider and evaluate the arguments and conclusions in the Expert Report of Terrance Hendershott, Ph.D. (the “Hendershott Report”) dated June 12, 2020, submitted by Defendants in this matter. I submitted a Reply Report dated July 27, 2020 (“Werner Reply”), in which I addressed the arguments and conclusions in the Hendershott Report. The Hendershott Report did not take issue with my conclusion that FXCM common stock traded in an efficient market during the Class Period. Rather, the Hendershott Report sought to question the efficiency of FXCM’s Notes during the Class Period and challenge my opinion on whether damages could

¹ Unless otherwise indicated, capitalized terms used herein have the meaning ascribed to them in the Werner Report and Werner Reply.

be calculated on a class-wide basis common to all class members and consistent with Plaintiffs' theory of liability.

4. Subsequently, I was asked by Lead Counsel for the Plaintiffs to determine whether the losses of the Plaintiffs and the Class were caused by Defendants' alleged misrepresentations and omissions (i.e. loss causation), as described in the Third Amended Consolidated Securities Class Action Complaint dated April 17, 2020 ("Complaint"). Furthermore, I was asked to quantify the loss, if any, due to Defendants' alleged misrepresentations and omissions on both a per share and per note basis (i.e. damages).

5. My full Vitae including testimony that I have provided since my previous reports is attached as Exhibit-1 to this report. The documents I reviewed and relied upon in the course of this engagement that are in addition to those cited in my previous reports are listed in Exhibit-2.

6. This report presents my methodology, findings, and conclusions relating to loss causation and the quantification of damages. I reserve the right to amend, refine, or modify my opinion and report, including in the event any new or additional information or analysis becomes available and to provide further analysis in response to any rebuttal report Defendants may submit.

CONCLUSIONS

7. The alleged misrepresentations and omissions caused the prices of the FXCM stock and FXCM Notes to be artificially inflated over the course of the Class Period. FXCM misled the market about the Company's purported lack of conflict of interest with customer transactions on FXCM's NDD platform. This, in turn, misled market participants about the extent of FXCM's exposure to regulatory scrutiny, the viability and sustainability of its business model, and FXCM's future profitability. The alleged fraud also concealed from the market the inextricable ramifications

that would manifest upon corrective disclosure, all of which in turn caused the prices of FXCM Securities to be artificially inflated.

8. The corrective disclosure at the end of the Class Period provided the market with the understanding that the Company's purported lack of conflict of interest was false, and as a result, the Company's business model would no longer be sustainable and FXCM would be subject to regulatory repercussions. Following the corrective disclosure, analysts' valuation models reflected the reality that the Company could no longer operate its business in the U.S and that FXCM had previously misrepresented the veracity of its agency business model. Thus, corrective disclosures and their inextricable ramifications dissipated the artificial inflation in the prices of FXCM Securities, and thereby caused investor losses.

9. Event study analysis, which considers and accounts for potentially confounding information, proves that the corrective disclosure on February 7, 2017 caused the prices of the FXCM Securities to fall significantly. The disclosure not only corrected the misinformation in the market, but simultaneously dissipated the artificial inflation caused by the misinformation.

10. In sum, the misrepresentations and omissions artificially inflated the prices of FXCM Securities, and corrective disclosures dissipated the artificial inflation, causing the securities' prices to decline, in turn causing investor losses. This loss causation conclusion is based on fundamental principles of finance and valuation, Company statements, internal Company documents, news articles, analyst reports, and event study analysis.

11. Financial and statistical analysis shows that on account of Defendants' misrepresentations and omissions, the Company's stock price was inflated by at least \$3.39 per share at the start of the Class Period, and throughout the Class Period. Financial and statistical analysis shows that on account of Defendants' misrepresentations and omissions, the Company's

Note price was inflated by at least \$16.31 per \$100 of par at the start of the Notes Period, and throughout the Notes Period.

12. Any investor who purchased FXCM Securities during the Class Period when they were artificially inflated and held that security until corrective disclosure on February 7, 2017 suffered a loss that was caused by the misrepresentations and omissions. Per share damages range up to \$3.39 per share for FXCM common stock and \$16.31 per \$100 of par for FXCM Notes.

FACTUAL BACKGROUND

A. About the Company

13. During the Class Period, FXCM described itself as “an online provider of foreign exchange (‘FX’) trading and related services” headquartered in New York, NY.² The Company provided “access to over-the-counter (‘OTC’) FX markets through [its] proprietary technology platform.”³ During the Class Period, the Company’s platform sought to provide its customers “the best price quotations” on currency pairs from various market makers, global banks, and financial institutions.⁴

14. During the Class Period, FXCM represented to market participants that it operated a conflict free “agency model” to execute its customers’ trades through a “no dealing desk” platform (“NDD”). In an agency model, a “customer executes a trade on the best price quotation offered by [FXCM’s] FX market makers,” with FXCM acting as a credit intermediary while “simultaneously entering into offsetting trades with both the customer and the FX market maker.”⁵

² FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2013, filed on March 17, 2014, p. 1.

³ FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2013, filed on March 17, 2014, p. 1.

⁴ FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2013, filed on March 17, 2014, p. 1.

⁵ FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2013, filed on March 17, 2014, p. 1.

The Company then added a markup to the price provided by the market makers and earned revenue in the form of trading fees and commissions.⁶ Therefore, FXCM's customers' profits or losses would purportedly have no effect on FXCM's performance, because FXCM's role was merely as an agent or credit intermediary.⁷ Plaintiffs allege that FXCM misled investors because FXCM's agency model and NDD were not free from conflicts as FXCM had an "undisclosed financial interest in the market maker that consistently 'won' the largest share of FXCM's NDD trading volume."⁸

15. For the fiscal years ended 2012 through 2016, the Company reported total net revenues of \$417.3 million, \$489.6 million, \$463.8 million, \$402.3 million, and \$284.1 million, respectively.⁹ At the start of the Class period, the Company operated along two business segments: retail trading and institutional trading.¹⁰ In 2012, 2013, and 2014, retail trading accounted for 85.1%, 77.4% and 76.6% of total net revenues, respectively.¹¹

16. On January 15, 2015, the Swiss National Bank announced that it would be "discontinuing the minimum exchange rate of CHF 1.20 per euro."¹² According to the Company,

⁶ FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2013, filed on March 17, 2014, p. 1.

⁷ Third Amended Consolidated Securities Class Action Complaint, filed on April 6, 2018, ¶3.

⁸ Third Amended Consolidated Securities Class Action Complaint, filed on April 6, 2018, ¶5.

⁹ FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2012, filed on March 18, 2013, p. 50; FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2013, filed on March 17, 2014, p. 45; FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2014, filed on March 16, 2015, p. 49; FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2015, filed on March 11, 2016, p. 50; and Global Brokerage, Inc., Form 10-K, for the fiscal year ended December 31, 2016, filed on March 20, 2017, p. 51.

¹⁰ FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2013, filed on March 17, 2014, p. 1.

¹¹ FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2012, filed on March 18, 2013, p. 1; FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2013, filed on March 17, 2014, p. 1; and FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2014, filed on March 16, 2015, p. 1.

¹² "Swiss National Bank discontinues minimum exchange rate and lowers interest rate to -0.75%," Swiss National Bank, press release, January 15, 2015.

this resulted in “unprecedented volatility in the EUR/CHF currency pair.”¹³ As a result, FXCM clients experienced significant losses and generated negative equity balances. These clients subsequently owed FXCM approximately \$276 million resulting in FXCM breaching its regulatory capital requirements.¹⁴ The regulatory capital requirement was the minimum net capital that FXCM needed to maintain across its subsidiaries in a relatively liquid form such as cash or cash equivalents. A firm in breach of its minimum net capital requirements may have its registration revoked, possibly resulting in the firm’s liquidation.¹⁵ To continue normal operations and maintain compliance with the regulatory capital requirements, FXCM took a \$300 million term loan from Leucadia National Corporation on January 16, 2015.¹⁶ Consequently, FXCM decided to sell its non-core assets.¹⁷ Meanwhile, the institutional trading segment that FXCM used to operate no longer met “the quantitative criteria” required for separate reporting.¹⁸ The remaining institutional business was combined with the retail business, and FXCM began reporting its operations under a single business segment of retail trading.

17. On February 6, 2017, the U.S. Commodity Futures Trading Commission (“CFTC”) found that FXCM “engaged in false and misleading solicitations of FXCM’s retail foreign exchange (‘forex’) customers.”¹⁹ While FXCM told its retail customers that it had no conflict of interest, and that it acted only as a credit intermediary on its “No Dealing Desk” platform, FXCM “had an undisclosed interest in the market maker that consistently ‘won’ the largest share of

¹³ FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2014, filed on March 16, 2015, p. 1.

¹⁴ FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2014, filed on March 16, 2015, p. 1.

¹⁵ FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2013, filed on March 17, 2014, p. 9.

¹⁶ FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2014, filed on March 16, 2015, p. 1.

¹⁷ FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2014, filed on March 16, 2015, p. 2.

¹⁸ FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2015, filed on March 11, 2016, p. 49.

¹⁹ “Order Instituting Proceedings Pursuant to Sections 6(c) And 6(d) of The Commodity Exchange Act, Making Findings, and Imposing Remedial Sanctions,” CFTC Docket No. 17-09, February 6, 2017.

FXCM's trading volume.”²⁰ This market maker “shared most of its trading profits with FXCM.”²¹ From 2010 through 2014, FXCM received approximately \$77 million from this market maker which FXCM did not disclose to its customers.²² The CFTC Order required FXCM to pay a civil monetary penalty of \$7 million and “to cease and desist from further violations of the Commodity Exchange Act and CFTC Regulations, as charged.”²³

18. As a result of this news, the value of FXCM common stock dropped over 68% (on a logarithmic basis) from \$6.85 to \$3.45 on February 7, 2017, on heavy trading volume (1.98 million shares of common stock, compared to a Class Period daily average of 0.15 million shares of common stock).²⁴ The value of the FXCM Notes also fell – dropping over 42% on February 7, 2017.

B. About FXCM Common Stock

19. Following its initial public offering on December 2, 2010, FXCM's shares traded on the New York Stock Exchange under the trading symbol FXCM.²⁵ On October 1, 2015, FXCM's shares underwent a one-for-ten reverse stock split.²⁶ On September 23, 2016, the Company voluntarily delisted its shares from the NYSE and listed its shares on the NASDAQ

²⁰ “Order Instituting Proceedings Pursuant to Sections 6(c) And 6(d) of The Commodity Exchange Act, Making Findings, and Imposing Remedial Sanctions,” CFTC Docket No. 17-09, February 6, 2017.

²¹ “Order Instituting Proceedings Pursuant to Sections 6(c) And 6(d) of The Commodity Exchange Act, Making Findings, and Imposing Remedial Sanctions,” CFTC Docket No. 17-09, February 6, 2017.

²² “Order Instituting Proceedings Pursuant to Sections 6(c) And 6(d) of The Commodity Exchange Act, Making Findings, and Imposing Remedial Sanctions,” CFTC Docket No. 17-09, February 6, 2017.

²³ “CFTC Orders Forex Capital Markets, LLC (FXCM), Its Parent Company, FXCM Holdings, LLC and FXCM's Founding Partners, Dror Niv and William Ahdout, to Pay a \$7 Million Penalty for FXCM's Defrauding of Retail Forex Customers,” *U.S. Commodity Futures Trading Commission*, press release, February 6, 2017.

²⁴ Volume data obtained from the CRSP.

²⁵ FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2013, filed on March 17, 2014, p. 41.

²⁶ FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2015, filed on March 11, 2016, p. 39.

Global Market, effective September 26, 2016.²⁷ On February 24, 2017 the Company changed its name to Global Brokerage, Inc., and the common shares traded under the symbol GLBR effective February 27, 2017.²⁸

20. At its Class Period peak, on December 18, 2014 FXCM's market capitalization stood at \$806.0 million. By the close of trading on February 7, 2017, the day after the last day of the Class Period, the Company's market capitalization had fallen to \$19.3 million.²⁹

C. About the FXCM Notes

21. On June 3, 2013, under Rule 144A, FXCM issued \$172.5 million in senior unsecured convertible fixed coupon notes due June 15, 2018.³⁰ The FXCM Notes paid 2.25% per annum interest semi-annually on the 15th of June and December in the form of a coupon payment.³¹

22. The initial purchasers of securities issued under Rule 144A are restricted from reselling those securities for a certain period after the date of issuance. The restrictions are determined by the issuer's reporting history and other characteristics such as trading volume and manner of sale requirements. The offering circular for the FXCM Notes set the end of the resale restriction to one year after the closing of the FXCM Notes' issuance.³² According to data obtained from the Financial Industry Regulatory Authority's (FINRA) Trade Reporting and Compliance Engine (TRACE), the FXCM Notes began trading on June 24, 2014.

²⁷ Global Brokerage, Inc., Form 10-K, for the fiscal year ended December 31, 2016, filed on March 20, 2017, p. 40.

²⁸ Global Brokerage, Inc., Form 10-K, for the fiscal year ended December 31, 2016, filed on March 20, 2017, p. 40.

²⁹ Data obtained from CRSP.

³⁰ FXCM Inc., Form 8-K, filed June 3, 2013, p. 2.

³¹ FXCM Inc., Form 8-K, filed June 3, 2013, p. 2.

³² FXCM Inc., Form 8-K, Exhibit 4.1, filed June 3, 2013, p. 16.

23. The FXCM Notes were a senior unsecured security, *i.e.* senior to FXCM's stock in the corporate capital structure. Interest on the notes was paid before common stock dividends were distributed and, in the event of a bankruptcy, principal would have to be repaid to note holders before common stockholders received any asset liquidation proceeds.

1. About Rule 144A Notes

24. The SEC explains that, "Under federal securities laws, all offers and sales of securities must be registered with the SEC or qualify for some exemption from the registration requirements."³³ Notes that are not registered with the SEC and are exempt from the typical registration requirements are commonly referred to as Rule 144A issues. Notes issued under Rule 144A can only be traded by qualified institutional buyers ("QIBs"), which are entities "acting for [their] own account or the accounts of other qualified institutional buyers, that in the aggregate owns and invests on a discretionary basis at least \$100 million in securities of issuers that are not affiliated with the entity."³⁴

25. Rule 144A is typically used by companies to obtain financing quickly. Without the need for a registration statement, issuers can attempt to secure more attractive financing terms when market conditions are favorable. In a 144A issue, the price of the notes is set by the underwriters after polling QIBs for their level of interest and pricing expectations.³⁵ In the pricing process, the underwriter and investors will perform the same analyses as analysts do in the secondary market (*e.g.* comparative companies analysis, earnings potential, expected growth, and

³³ <https://www.sec.gov/answers/rule144.htm>.

³⁴ "Rule 144A—Private Resales of Securities to Institutions," *Securities Lawyer's Deskbook*, The University of Cincinnati College of Law.

³⁵ "Corporate Bond Operational Underwriting Process: Business Practices in 'Plain English,'" *The Bond Market Association*, 9 December 2004.

macro-economic analyses etc.).³⁶ Thus, the pricing of a 144A issue is driven by the same valuation considerations as the pricing of a registered issue in the secondary market.

D. Summary of Lead Plaintiff's Allegations

26. The Plaintiffs allege that “During the Class Period, FXCM knowingly misled investors in the Company’s periodic reports filed with the SEC and other public statements by falsely claiming that its customers who transacted on FXCM’s “No Dealing Desk” (“NDD”) platform would be free from conflicts of interest because FXCM would not be on the other side of the trade or have any financial interest in the trade.”³⁷ Specifically, Plaintiffs allege that FXCM falsely represented/omitted to investors and market participants that:

- a. “retail customers’ profits or losses would have no effect on FXCM’s interests, because FXCM’s role was merely as an agent or credit intermediary.”³⁸
- b. “Despite the Company’s claims of having no conflicts of interest for its retail customers trading on the NDD platform, FXCM in fact had an undisclosed financial interest in the market maker that consistently ‘won’ the largest share of FXCM’s NDD trading volume, Effex Capital, LLC (“Effex”).”³⁹
- c. “Effex was essentially a front created by FXCM, allowing for FXCM to hold positions opposite its customers and financially benefit at its customers’

³⁶ “How Corporations Issue Securities,” *Principles of Corporate Finance*, by Franklin Allen, Stewart Myers, and Richard Bradley, McGraw Hill Irwin, 8th edition, Chapter 15.2, pp. 387-394.

³⁷ Complaint, ¶2.

³⁸ Complaint, ¶3.

³⁹ Complaint, ¶5.

expense—in direct contravention to the Company’s representations to investors and its own customers of conflict free trading on the NDD.”⁴⁰

- d. “FXCM manipulated its NDD platform by putting Effex in front of independent market makers in routing retail customer orders while also permitting Effex to win all “ties” with other market makers. FXCM provided Effex with a real-time view of price quotations offered by other market makers and added smaller markups to Effex prices than to prices provided by other market makers. This way FXCM ensured that the bulk of its order flow would go to Effex and generate profits for FXCM.”⁴¹
- e. “Effex’s payments to FXCM were disguised as “order flow” payments, which no other market maker was making to FXCM.”⁴²
- f. “FXCM’s financial statements violated SEC regulations and Generally Accepted Accounting Principles (“GAAP”) for failing to disclose FXCM’s economic interest in, contractual and related party relationship with, and control over, Effex during the Class Period.”⁴³

LOSS CAUSATION

27. According to the Private Securities Litigation Reform Act of 1995, “the plaintiff shall have the burden of proving that the act or omission of the defendant alleged to violate this chapter caused the loss for which the plaintiff seeks to recover damages.”⁴⁴

⁴⁰ Complaint, ¶5.

⁴¹ Complaint, ¶10.

⁴² Complaint, ¶11

⁴³ Complaint, ¶13

⁴⁴ Private Securities Litigation Reform Act of 1995, 15 U.S.C. §78u-4.

28. To assess loss causation, the empirical behavior of a subject security following the revelation of the information alleged to have been concealed is important for determining whether the alleged misrepresentation and omissions had inflated the security price, and if the corrective disclosure caused the security price to decline. One typically conducts an event study to determine whether such revelatory events were a substantial cause of a security price decline. An event study focused on residual returns, which exclude and control for the effects of market and sector factors, measures how much a security price rises or falls in response to new information. That is, an event study is essentially a controlled experiment that allows one to observe the market's valuation of the security with and without the information at issue. Prior to a corrective disclosure, the security is valued in the marketplace without the new information. After the event, the security is valued with the newly-released information.

29. Once the event study has established a security price reaction to a company-specific disclosure, one may remove the effects of potentially company-specific non-fraud-related (i.e., confounding) information, if any, to determine whether the allegation-related information was a substantial cause of the residual security price decline. Valuation tools can be used to remove the effect of confounding information from the price decline, if any. After controlling for company-specific non-fraud-related information, if any, one can determine whether the disclosures and ramifications correcting the alleged misrepresentations and omissions were a substantial cause of the residual security price decline.

30. Additional elements of loss causation analysis include examining fundamental valuation principles, company statements, and analysts' commentary and valuation models in order to assess whether the subject matter of the alleged misrepresentations and omissions is or is not important valuation information.

A. Timeline of Events

31. A review of the following select events provides background and context for understanding the status quo in relation to Lead Plaintiff's allegations and the Company's condition. Included are descriptions of some of Defendants' alleged false statements and omissions, as well as media and analyst commentary.

1. Pre-Class Period Events

32. FXCM was founded in 1999 as an online provider of foreign exchange (FX) trading and related services.⁴⁵ Until 2007, FXCM primarily employed what is known as a "principal model," supplying liquidity to its retail forex customers through a dealing desk.⁴⁶ With a principal model, FXCM would take trading positions opposite of its customers. That is, if a customer wanted to sell/buy a particular currency pair, the Company would purchase/sell said currency pair. FXCM was able to profit from such a service when the value of said currencies increased or decreased contrary to customers' positions.

33. In 2007, FXCM changed its business model from the principal model to an "agency" or "no dealing desk" business model.⁴⁷ FXCM represented that its agency-trading model avoided the conflicts of interest between itself and its customers inherent in a principal model.⁴⁸ FXCM explained that it would purportedly act as a credit intermediary rather than trading directly with customers as a dealing desk. As a credit intermediary, the Company would supposedly seek out the best currency price for its customers among an assortment of liquidity providers. Through this agency model, FXCM represented that it would generate profits only by including a fractional

⁴⁵ FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2011, filed on March 15, 2012, p. 13.

⁴⁶ FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2011, filed on March 15, 2012, p. 8.

⁴⁷ FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2011, filed on March 15, 2012, p. 8.

⁴⁸ FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2011, filed on March 15, 2012, p. 1.

markup to each bid/ask quote received from its customers and the liquidity provider with which it chose to do business. In addition, FXCM represented that it generated additional revenues directly from market makers when it sent its customers' trades to such market makers.

34. Sometime in 2009, Plaintiffs allege that FXCM began colluding with a high-frequency trader, John Dittami, in order to develop a trading algorithm that would supplant the market makers FXCM was supposed to be seeking out for its customers. Concerned that operating the trading system internally would contradict their public statements about the No Dealing Desk model, FXCM decided to spin off the trading operation as a new "independent" market maker, Effex, who would pay FXCM most of its profits via kickbacks framed as "payments for order flow." According to Plaintiffs' allegations, no other market maker made any material payments to FXCM for "order flow" during the time that Effex was making these payments. Effectively, FXCM would then generate profits both from the mark up to customers for trading via the Company's platform and from kickbacks from Effex. In this way, Plaintiffs allege that contrary to FXCM's representations, the Company maintained and profited off of conflicts of interests with its customers.

2. March 15, 2012 through August 1, 2014

35. From the start of the Class Period through August 1, 2014, FXCM continued to operate its business and profit off of its relationship to Effex. Further, FXCM made a series of alleged misrepresentations and omissions regarding its purported lack of conflicts of interest with its customers. For example:

- a. On October 17, 2012 the analyst firm BGB Securities described that the Company deploys an "agency model that aligns its interests with those of

customers and yields revenue through trade markup as opposed to gains on trades earned through a principal model.”⁴⁹

- b. On October 22, 2013, the Company sent an email to the NFA (National Futures Association) asserting that “FXCM LLC does not have any direct or indirect ownership, interest, or affiliation with entities that provide liquidity to retail clients.”⁵⁰
- c. On November 29, 2012, during a conference call the Company compared itself to its competitors that “take the other side of customer trades and choose to hedge depending on their assessment of your trading ability and who you are.”⁵¹ The Company claimed that it is “very unique in the space” as it does not take the other side of the investor’s trade and simply acts as an intermediary between the investor and market maker:

the way the model works is we have, on the retail side, 16 market makers, people like Barclays, J.P. Morgan, some hedge funds streaming quotes to our clients. At any given point, if let’s say you were trying to short yen and go long Swiss, say, it could be Barclays is the best offer at that point. When you hit, we immediately would hit Barclays. We hit you. We stand in between. Barclays just see FXCM. We see the customer. We monitor your margin over three times a second. As soon as you breach your margin, we kick you out of the position, we close it out on the same side. But at the end of the day, we are making our money off volume. We hope that you are successful in your trade, but whether you are or you’re not, that is not impacting our P&L now.⁵² it is an over-the-counter market so we are doing

⁴⁹ “Important disclosures can be found on the last page of this report.” by Faye Elliot, BGB Securities, analyst report, October 17, 2012, p. 2.

⁵⁰ Complaint, ¶88.

⁵¹ “FXCM - FXCM Inc. at J.P. Morgan SMid Cap Conference,” *Thomson Reuters*, conference call, November 29, 2012, p. 2-3.

⁵² “FXCM - FXCM Inc. at J.P. Morgan SMid Cap Conference,” *Thomson Reuters*, conference call, November 29, 2012, p. 4.

the clearing. We are the exchange. We have outsourced the market making to 16 market makers who stream quotes at any given time.⁵³

- d. On March 24, 2014, after the NFA sought clarification of the statement on October 22, 2013, the Company issued another statement to the NFA in an email stating “To my knowledge, there are no present or past owners, principals, APs, or employees of affiliates of FXCM LLC that have direct or indirect ownership, interest, or affiliation with entities that provide liquidity to retail clients on our No Dealing Desk Model.”⁵⁴
- e. On April 4, 2014, the Company issued another statement to the NFA via email, in response to multiple attempts by the NFA to clarify the relationship between FXCM and Effex. The Company stated in an email that Dittami served as a consultant for FXCM from October 2009 through April 2010, working primarily on software coding—in an attempt to downplay Dittami in connection with NFA’s inquiry into FXCM’s relationship with Effex.⁵⁵

3. October 15, 2014 – February 2017: The CFTC Investigates FXCM’s Business Relationship with Effex

36. On or about October 15, 2014, the CFTC sent a request to FXCM for Production of Documents and information relating to “Effex’s business and/or financial relationship with FXCM, including, but not limited to, Effex’s relationship as a liquidity provider to FXCM.”⁵⁶

⁵³ “FXCM - FXCM Inc. at J.P. Morgan SMid Cap Conference,” *Thomson Reuters*, conference call, November 29, 2012, p. 2-3.

⁵⁴ Complaint, ¶89.

⁵⁵ Complaint, ¶90.

⁵⁶ Complaint, ¶74.

37. On or about February 19, 2015, the NFA sent the Company a letter (NFA Preservation Notice), that instructed the Company to preserve all documents relating to Effex, Dittami and any related entities. In the letter it stated “[a]s you know, NFA has been conducting a review of FXCM's relationship with Effex and John Dittami’ and that ‘the review is ongoing.’”⁵⁷

38. On or about July 2, 2015, the CFTC sent a letter (CFTC Preservation Notice) to the Company, instructing the Company to preserve documents “relating to Effex, the creation of Effex, Effex's operation, and/or financial relationship with FXCM, and Effex's role as a liquidity provider and/or market maker to FXCM.”⁵⁸

39. On or about August 13, 2015, the CFTC issued a subpoena to Dror Niv, CEO of FXCM since 1999, in the matter of “Retail Forex Fraud” looking for information and documents relating to FXCM’s business and financial relationship with Effex.⁵⁹

40. On or about September 18, 2015, the Company signed a tolling agreement with the CFTC Division of Enforcement (CFRC Tolling Agreement). The agreement stated that “the Division has notified FXCM, through its counsel that the Division is conducting an investigation to determine whether there have been violations of certain provisions of the Commodity Exchange Act and/or Commodity Futures Trading Commission Regulations.”⁶⁰

4. July 21, 2015

41. On July 21, 2015, the Company announced a one for ten reverse stock split of all of its issued Class A common stock, following the loss of 87% of their value on January 16th, when

⁵⁷ Complaint, ¶75.

⁵⁸ Complaint, ¶76.

⁵⁹ Complaint, ¶77.

⁶⁰ Complaint, ¶78.

the Swiss Central Bank removed its cap on the Swiss Franc.⁶¹ Drew Niv, CEO and Chairman of the Board, told the market that “The execution of this reverse split represents an important step in achieving several significant corporate objectives, including FXCM's continued listing on the New York Stock Exchange.”⁶² The Company stated in a preliminary proxy statement filed with the SEC that “We believe that the Reverse Stock Split will enhance our ability to maintain our listing on the NYSE. NYSE requires, among other items, an initial bid price of least \$3.00 per share and following initial listing, maintenance of a continued price of at least \$1.00 per share.”⁶³ News outlets commented on the Company’s decision:

FXCM’s stock closed Tuesday at \$1.29 a share, and it was quoted at \$1.22 in after-hours trading. Shares, which traded at \$12.63 on Jan. 16, lost 87% of their value after Switzerland’s central bank removed its cap on the Swiss franc. The NYSE requires, among its listing conditions, that a company maintain a price of at least \$1 a share. A higher share price, the company said, could also appeal to brokerage houses and institutional investors that would ordinarily shy away from low-price stocks.⁶⁴

Shareholders would have to approve the 1-for-10 reverse stock split announced Tuesday. A special meeting of shareholders has been scheduled for Sept. 21. FXCM, one of the largest retail currency brokers in the world, provides online foreign-exchange trading, CFD trading, spread betting and related services. The New York-based broker lost millions of dollars this year after the Swiss National Bank removed its cap on the value of the Swiss franc. Leucadia National Corp. (LUK, US) rescued FXCM with an emergency \$300 million lifeline.⁶⁵

⁶¹ “FXCM Announces 1-for-10 Reverse Stock Split,” *Globe Newswire*, press release, July 21, 2015.

⁶² “FXCM Announces 1-for-10 Reverse Stock Split,” *Globe Newswire*, press release, July 21, 2015.

⁶³ FXCM Inc., Form Pre-14A, filed July 21, 2015.

⁶⁴ “Forex Broker FXCM Plans 1-for-10 Reverse Stock Split,” by Maria Armental, *Dow Jones News*, July 21, 2015.

⁶⁵ “Forex Broker FXCM Plans 1-for-10 Reverse Stock Split,” by Maria Armental, *MarketWatch*, July 21, 2015.

5. February 7, 2017

42. On February 6, 2017, after the close of trading, the CFTC issued a press release and an Order Instituting Proceedings, announcing that “FXCM engaged in false and misleading solicitations of FXCM’s retail foreign exchange (forex) customers by concealing its relationship with its most important market maker and by misrepresenting that its ‘No Dealing Desk’ platform had no conflicts of interest with its customers.”⁶⁶ The CFTC Order required FXCM to permanently withdraw from registration with the CFTC and CFA, not accept any new customer accounts, pay a civil monetary penalty of \$7 million, and “to cease and desist from further violations of the Commodity Exchange Act and CFTC Regulations, as charged.”⁶⁷ The CFTC Order found that “FXCM had an undisclosed interest in a market maker that consistently ‘won’ the largest share of FXCM’s trading volume,” and that “the market maker would rebate to FXCM approximately 70 percent of its revenue from trading on FXCM’s retail forex platform.”⁶⁸ From 2010 through 2014, FXCM received approximately \$77 million from this market maker, which FXCM did not disclose to its customers.

43. FXCM issued a press release announcing regulatory settlements with both the CFTC and the National Futures Association. The Company also announced that, “pursuant to the settlement agreements, the Company will be withdrawing from business in the United States.”⁶⁹

⁶⁶ “CFTC Orders Forex Capital Markets, LLC (FXCM), Its Parent Company, FXCM Holdings, LLC and FXCM’s Founding Partners, Dror Niv and William Ahdout, to Pay a \$7 Million Penalty for FXCM’s Defrauding of Retail Forex Customers,” *U.S. Commodity Futures Trading Commission*, press release, February 6, 2017.

⁶⁷ “CFTC Orders Forex Capital Markets, LLC (FXCM), Its Parent Company, FXCM Holdings, LLC and FXCM’s Founding Partners, Dror Niv and William Ahdout, to Pay a \$7 Million Penalty for FXCM’s Defrauding of Retail Forex Customers,” *U.S. Commodity Futures Trading Commission*, press release, February 6, 2017.

⁶⁸ “CFTC Orders Forex Capital Markets, LLC (FXCM), Its Parent Company, FXCM Holdings, LLC and FXCM’s Founding Partners, Dror Niv and William Ahdout, to Pay a \$7 Million Penalty for FXCM’s Defrauding of Retail Forex Customers,” *U.S. Commodity Futures Trading Commission*, press release, February 6, 2017.

⁶⁹ FXCM Inc., Form 8-K, filed on February 7, 2017.

44. Analysts and news commentary deemed the above news as negative. Oppenheimer and Cowen and Company analysts commented as follows:

Yesterday FXCM made an announcement (see below) that led to a 50% decline in FXCM's share price. One component, but in our view by no means the most valuable component, of LUK's investment in FXCM is a 49.9% ownership stake in FXCM and this has of course raised concerns about the valuation of the asset. ... To settle the charges, FXCM will pay \$7 million to the CFTC and no monetary damages to the NFA. The company will also be shutting down its U.S. business. ... On Feb 6 FXCM announced a \$7M settlement with the CFTC which essentially forced them to sell their US business. The CFTC complaint said FXCM and two of its founding principals made 'false and misleading solicitations by concealing from customers that a chief market maker was rebating roughly 70% of its revenues to FXCM.' It obviously sounds like a terrible fact pattern.⁷⁰

FXCM announced late yesterday that it had reached agreements with the National Futures Association (NFA) and Commodity Futures Trading Commission (CFTC) settling charges that the company did not disclose to customers that it had an interest in the market maker that traded the largest share of FXCM's trading volume. The CFTC order found that the market maker paid roughly 70% of the revenues generated from FXCM's platform back to FXCM. To be clear, this matter was not in the August complaint from the CFTC. We believe this new settlement resolves this new issue and at least some of the issues that had been part of the original August complaint. ... To settle the charges, FXCM will pay \$7 million to the CFTC and no monetary damages to the NFA. The company will also be shutting down its U.S. business. ... Also, as a financial services company, it is certainly not a good thing for their ongoing foreign operations that they were pretty much forced out of the U.S. and that their debt and equity prices put parent level solvency into question (at least in the market's minds). Solvency was, of course, always a question but now it is a front and center question.⁷¹

FXCM plans to lay off about 150 workers, or about 18% of its workforce, as it restructures operations following two regulatory settlements that forced it to exit the US market. The foreign-exchange broker, which is selling its US customer accounts to Gain, expects to recognize the bulk of

⁷⁰ "FXCM Negative Developments but Likely a Relatively Small Financial Impact on LUK," by Chris Kotowski et al., Oppenheimer, analyst report, February 7, 2017, p. 1.

⁷¹ "FXCM Settles with Regulators, Plans to Exit U.S. Business," by David Epstein and Patrick Marshall, Cowen and Company, analyst report, February 7, 2017.

the pre-tax restructuring charges in the March quarter, according to a regulatory filing. Shares drop 54% to \$3.13.⁷²

The Commodity Futures Trading Commission hit Forex Capital Markets, parent company FXCM Holdings and two founding partners with a \$7 million fine over alleged trading misrepresentations. Now FXCM Inc. is pulling out of the U.S., in an exit that will free up almost \$52 million in capital. GAIN Capital Holdings Inc. is acquiring the U.S. client base.⁷³

LOSS CAUSATION ANALYSIS

45. The alleged misrepresentations, omissions, and deceptive conduct misled the market about the Company's purported lack of conflict of interest with customer transactions on FXCM's NDD platform. This, in turn, misled market participants about the extent of FXCM's exposure to regulatory scrutiny, the viability and sustainability of its business model, and FXCM's future profitability. The alleged fraud also concealed from the market the inextricable ramifications that would manifest upon corrective disclosure, all of which in turn caused the prices of FXCM Securities to be artificially inflated.

46. Corrective disclosure at the end of the Class Period provided the market with the understanding that the Company's claims about its purported lack of conflict of interest were false, and that as a result, the Company's business model would no longer be sustainable and FXCM would be subject to regulatory repercussions. Following the corrective disclosure, analysts' valuation models reflected the reality that the Company could no longer operate its business in the U.S and that FXCM had previously misrepresented the veracity of its agency business model. Thus, the corrective disclosure and its inextricable ramifications dissipated the artificial inflation in the prices of FXCM Securities, and thereby caused investor losses.

⁷² "FXCM to Lay Off Workers as It Exits US Markets -- Market Talk," *Dow Jones Institutional News*, February 7, 2017.

⁷³ "FXCM Exits US Biz; Citi, JPMorgan Gain China Interbank Bond Market Licenses," by Nicole De Dios, *SNL Financial Extra*, February 7, 2017.

47. These conclusions are based on generally accepted principles of valuation, Company statements, analyst reports, analysts' valuation models, and an event study focusing on the empirical reactions in the prices of FXCM Securities to the corrective disclosure announcement and ramifications.

A. Financial Principles

1. Disclosure Transparency and Reliability

48. It is well-established in the finance and accounting literature that the truthfulness and reliability of Company is an important factor that affects the value of a company's securities. The quality of a Company's disclosure, consequently, also bears on valuation. The following quotes from published peer-reviewed literature attest to these generally accepted and well-established facts.

“The consensus among financial economists is that a rich disclosure environment and low information asymmetry have many desirable consequences. These include the efficient allocation of resources in an economy, capital market development, liquidity in the market, decreased cost of capital, lower return volatility, and high analyst forecast accuracy.”⁷⁴
 “First, confirming prior research we find that stronger shareholder rights and increased financial transparency/disclosure in the post-Enron era are jointly associated with significantly lower costs of equity capital.”⁷⁵

49. The literature explains how accurate and transparent information disclosure by management, can lower the cost of capital for a company, and increase the value of a company's securities. FXCM's intentionally inaccurate and opaque representations regarding the exposures inherent in its business model undoubtedly affected the market's assessment of the value of the

⁷⁴ “The Effect of Disclosures by Management, Analysts, and Business Press on Cost of Capital, Return Volatility, and Analyst Forecasts: A Study Using Content Analysis” by S.P. Kothari et al., *The Accounting Review*, 2009, p. 1640.

⁷⁵ “Shareholder Rights, Financial Disclosure and the Cost of Equity Capital,” by C. S. Agnes Cheng et al., *Review of Quantitative Finance and Accounting*, 2006, p. 200.

Company and its securities during the Class Period. Had these deliberate omissions and misrepresentations been disclosed to the market during the Class Period, the security prices would have declined then just as they did upon their ultimate disclosure.

2. Negative Valuation Impact of Fraud

50. It is well-established in the finance literature that the ramifications of a fraud extend well beyond the direct dollar amount of the fraud, but also cause further loss on account of damage to a company's business and prospects. This principle is generally accepted and presented in the academic and professional literature. For example:

“Risk/uncertainty likely increases and future prospects may well decrease when management integrity and competence are called into question.”⁷⁶

“In cases of internal fraud, the loss in market value is greater than [*sic*] the operational loss amount announced, which is interpreted as a sign of reputational damage. Negative impact is proportionally greater when the loss amount represents a larger share in the company's net profit.”⁷⁷

51. Karpoff et al. [2008] also found that when fraud is disclosed, the damage to a firm's reputation, business, and prospects has significant negative valuation impact because of the adverse impact on future cash flows stemming from loss of business and higher cost of financing, among other things.⁷⁸

B. Company and Analyst Statements

52. Consistent with the fundamental valuation principles set forth above, the Company and analysts considered information about the desirability of the agency model, the source of the

⁷⁶ “Determinants of Market Reactions to Restatement Announcements,” by Zoe-Vonna Palmrose et al., *Journal of Accounting & Economics*, 2004, p. 63.

⁷⁷ “Operational Risk and Reputation in the Financial Industry,” by Roland Gillet et al., *Journal of Banking & Finance*, 2009.

⁷⁸ “The Cost to Firms of Cooking the Books,” by Jonathan Karpoff et al., *Journal of Financial and Quantitative Analysis*, 2008.

Company's revenues, level of regulatory scrutiny, transparency of accounting, and management's credibility to be important to the value of the Company's securities.

53. This particular information and associated performance metrics were the focus of the Company's periodic announcements to the investment community (comprising allegedly false and misleading statements), and in the reports of analysts covering FXCM.

EMPIRICAL CONFIRMATION OF LOSS CAUSATION

A. Event Study

54. In order to determine whether the alleged misrepresentations, omissions, deceptive conduct, and subsequent corrective disclosures and their inextricable ramifications caused losses to investors, I conducted an event study. An event study examines whether a security price reacts to the release of new information. A statistically significant stock price reaction in response to the release of new information indicates that the new information caused the price change.

55. Event study analysis is one of the most commonly used analytic methodologies employed by finance researchers. MacKinlay [1997] presents a description and examples of the methodology and writes about how it is generally accepted and widely used in academic research.⁷⁹ Gold et al. [2017] write about how the methodology is generally accepted and widely used in forensic applications.⁸⁰

56. An event study measures how much a stock price rises or falls in response to new company-specific information. It first determines how much of a stock price change is explained by market and sector factors. The portion of a stock price change that cannot be attributable to

⁷⁹ "Event Studies in Economics and Finance," by A. Craig MacKinlay, *Journal of Economic Literature*, March 1997.

⁸⁰ "Federal Securities Acts and Areas of Expert Analysis," by Kevin Gold et al., in Chapter 27 of the *Litigation Services Handbook: The Role of the Financial Expert*, 6th ed., edited by Roman Weil, Daniel Lentz, and Elizabeth Evans, John Wiley & Sons, Inc., 2017.

market and sector factors is called the residual stock price movement or “residual return.” The event study isolates the residual return and also tests whether or not the residual return can reasonably be explained as merely a random fluctuation.

57. If the stock return is deemed statistically significant, it indicates that the stock price movement cannot be attributed to market and sector factors, or to random volatility, but rather was caused by new company-specific information.

1. Identification of Corrective Disclosure

58. To identify potential corrective disclosures for purposes of assessing whether the alleged misrepresentations and omissions caused investor losses, I reviewed a wide variety of information sources, including the Complaint, news articles, press releases, equity analyst reports, and SEC filings to determine when information and ramifications related to, or precipitated by, the alleged misrepresentations and omissions transpired. There was one such event at the end of the Class Period, February 7, 2017.

2. Isolating the Impact of Company-Specific Information

59. One component of an event study is to determine how much of a company’s stock returns are attributable to market and sector effects, so that these factors can be isolated and removed.

60. The method, which is generally accepted and widely used in econometric modeling, first involves running a regression to determine how a company’s stock price typically behaves in relation to the overall stock market and its industry sector. Then, the regression model is used to determine how much of each event day’s actual return is explained by the market and sector factors (the “explained return”). The actual return minus the explained return is the residual return, which measures the stock return after removing both the market and industry sector effects.

a. FXCM Common Stock

61. I conducted regression analysis to isolate and remove overall stock market and industry sector effects from FXCM's common stock returns on the event dates, thereby calculating the residual return for FXCM common stock.

62. I ran a regression modeling the return of FXCM common stock as a function of 1) a constant term, 2) the returns of the overall stock market, and 3) an industry sector index return.

63. For the overall stock market factor, I used the CRSP NYSE/AMEX/NASDAQ Market Index ("Market Index"), which is a generally accepted and widely used measure of the overall stock market performance. The Market Index appropriately incorporates payment of dividends by the constituent companies.

64. For the sector factor, I used a custom index comprised of 10 companies: TD Ameritrade Corporation, The Charles Schwab Corporation, E*Trade Financial Corporation, Gain Capital Holdings, Inc., BGC Partners, Inc., Investment Technology Group, FactSet Research Systems, Inc., INTL FCStone, Inc., Interactive Brokers Group, Inc., and MSCI, Inc., as the peer group index ("Industry Index") as FXCM compares its performance to this index in its financial statements.⁸¹

65. All returns used in the regressions are logarithmic returns – that is, the natural logarithm of the ratio of the current day's closing price plus dividends to the previous day's closing price. Logarithmic returns are commonly used in event studies and equity analysis. Analysts and researchers generally use logarithmic returns instead of percent price changes because of various computational advantages.

⁸¹ FXCM Inc., Form 10-K, for the fiscal year ended December 31, 2015, filed on March 11, 2016, p. 41.

66. In the Werner Report, I ran a regression on daily returns covering, respectively, the entire Class Period, Interval-1 (March 15, 2012 through February 1, 2013), Interval-2 (February 4, 2013 through February 3, 2014), Interval-3 (February 4, 2014 through February 5, 2015), Interval-4 (February 6, 2015 through February 5, 2016, and Interval-5 (February 8, 2016 through February 6, 2017).⁸²

67. I used the same dummy variables identified in the Werner Report, which included the indicator variables to control for potentially abnormal returns following the Swiss Bank announcement.⁸³ Using dummy variables to control for potentially important events in the estimation period, especially when those dates are the subject of the event study analysis, so that the model parameters properly reflect typical stock price movements, is a widely used and generally accepted methodology, as noted in the academic and finance literature.⁸⁴

68. I computed the explained portion of the FXCM common stock return on each event date by adding: 1) the estimated regression intercept term, 2) the respective day's Market Index return multiplied by the Market Index coefficient estimated by the regression, and 3) the respective day's Sector Index return multiplied by the regression's Sector Index coefficient.

69. I then computed the residual returns by subtracting each day's explained return from the actual return.

⁸² Werner Report, ¶76.

⁸³ Werner Report, ¶77.

⁸⁴ See, e.g., "Event Studies with a Contaminated Estimation Period," by Nihat Aktas et al., *Journal of Corporate Finance*, 2007; "Measuring the Effects of Regulation with Stock Price Data," by John J. Binder, *The RAND Journal of Economics*, 1985; "Intervention Analysis with Applications to Economic and Environmental Problems," by G. E. P. Box and G. C. Tiao, *Journal of the American Statistical Association*, 1975; "Testing for Market Efficiency: A Comparison of the Cumulative Average Residual Methodology and Intervention Analysis," by David F. Larcker et al., *Journal of Financial & Quantitative Analysis*, 1980; "Measuring Abnormal Performance: The Event Parameter Approach Using Joint Generalized Least Squares," by Paul H. Malatesta, *The Journal of Financial and Quantitative Analysis*, 1986; "Conditioning the Return-Generating Process on Firm-Specific Events: A Discussion of Event Study Methods," by Rex Thompson, *The Journal of Financial and Quantitative Analysis*, 1985.

70. FXCM common stock regression inputs are presented in Exhibit-3 and Exhibit-4. The regression results are presented in Exhibit-5a through Exhibit-5e.

71. The event study results are presented in Exhibit-6.

b. The FXCM Notes

72. I performed the regression analysis for the Notes on daily returns covering the portion of the Class Period for which data was available, from the end of the resale restriction on June 24, 2014 to February 7, 2017. As is common in the bond market, for the FXCM notes there were days on which no trading took place. For the Notes, the regression data series included only days on which there was a trading price for two consecutive trading days, so that a one-day return could be computed. All returns for the FXCM notes were one-day logarithmic returns.

73. Next, I included the same indicator (dummy) variables as I did for the common stock to control for potentially abnormal returns in the price of the FXCM Notes. I then computed the abnormal return (or residual return) by subtracting the expected return from the observed stock price return. The abnormal return is the return of FXCM Notes after controlling for market, industry, and market interest rate factors and reflects the effects of Company-specific information on the price of the FXCM Notes.

74. FXCM Notes' regression inputs are presented in Exhibit-4 and Exhibit-7 and the regression results are presented in Exhibit-8.

75. The FXCM Notes' event study results are presented in Exhibit-9.

3. t-test

76. For each event, a statistical test called a t-test was conducted to determine whether the residual returns of the FXCM Securities were statistically significant. Statistical significance means that the event return after controlling for the market and industry sector effects was of such

magnitude that it cannot be explained by random volatility, but alternatively must have been caused by new, Company-specific information. A t-test compares the residual return on an event date to the typical residual return exhibited over the corresponding regression estimation period. If the event date residual return is far greater (positively or negatively) than the typical residual return, the t-test indicates that the residual return is statistically significant.⁸⁵

77. The event study results for FXCM common stock are presented below and summarized in Exhibit-6. The event study results for the FXCM Notes are summarized in Exhibit-9.

B. Event Study Result and Analysis: February 7, 2017

1. Significant Common Stock Price Decline

78. On February 7, 2017, FXCM common stock declined 68.59% (on a logarithmic return basis). Based on the regression model, the explained return on FXCM common stock was -0.37%. The difference between the actual return of -68.59% and the explained return of -0.37% is a residual return of -68.22%, or \$3.39 per share.

79. A residual return of -68.22% is an unusually large one-day decline for FXCM common stock. That residual return is associated with a t-statistic value of -20.73, which indicates that the residual return was too severe to have been merely a random fluctuation. The likelihood of obtaining a residual return of this magnitude and associated t-statistic given that particular explanation is virtually nil. Therefore, the stock price decline is deemed statistically significant.

⁸⁵ The test is called the *t*-test because it involves the computation of a *t*-statistic, which is the event day residual return divided by the standard deviation of residual returns from the control period, i.e., the regression estimation data comprising all other days. If the absolute value of the *t*-statistic is greater than the critical *t*-statistic value (± 1.97 for large samples), the likelihood that the residual return could have been caused by random volatility alone is less than 5%, which is generally accepted to be so unlikely that the random volatility explanation can be rejected, and the security return for that day is deemed statistically significant.

2. Significant Note Price Decline

80. On February 7, 2017, FXCM Notes declined 42.18% (on a logarithmic return basis). Based on the regression model, the explained return on FXCM Notes was 0.17%. The difference between the actual return of -42.18% and the explained return of 0.17% is a residual return of -42.35%, or \$16.31 per \$100 of par.

81. A residual return of -42.35% is an unusually large one-day decline for FXCM Notes. That residual return is associated with a *t*-statistic value of -26.08, which indicates that the residual return was too severe to have been merely a random fluctuation. The likelihood of obtaining a residual return of this magnitude and associated *t*-statistic given that particular explanation is virtually nil. Therefore, the stock price decline is deemed statistically significant.

3. Identification of Company-Specific Disclosure

82. I examined all of the Company-related news that emerged on February 7, 2017, and assessed the valuation impact, if any, of potentially confounding information. I found no other Company-specific news that would reasonably have contributed to the -68.22% residual return in FXCM common stock and -42.35% residual return in FXCM Notes, other than the CFTC Order and the ramifications of this disclosure.

83. I therefore conclude that the entirety of the residual declines in FXCM Securities on February 7, 2017 was caused by the February 6, 2017 (after the close of trading) corrective disclosures and the ramifications and financial implications associated therewith. This result proves that the alleged fraud caused investor losses.

C. Event Study Summary

84. The statistical significance of the residual declines in the prices of the FXCM Securities following corrective disclosure, coupled with examination for potentially confounding

information, establish that the alleged fraud in all of its manifestations had inflated the market prices of FXCM Securities. The corrective disclosure and its inextricable ramifications dissipated the artificial inflation in the prices of FXCM Securities, and thereby caused investor losses. It follows that the alleged misrepresentations, omissions, and deceptive conduct were responsible for investor losses and damages.

DAMAGES

85. The “out-of-pocket” measure of per share damages traditionally applied in 10b-5 cases is the difference between the actual purchase price of the security and what would have been the purchase price of the security had there been no alleged fraud.

[M]any courts have adopted the out-of-pocket rule as the traditional measure of damages in Rule 10b-5 cases. The out-of-pocket measure rule defines damages as ‘the difference between the contract price, or the price paid, and the real or actual value at the date of the sale, together with such outlays as are attributable to the defendant’s conduct. Or, in other words, the difference between the amount parted with and the value of the thing received.’ Typically, courts measure this as the plaintiff’s purchase price less the true value at the time of the transaction. The true value is the price of the security in the absence of fraud or misrepresentation.⁸⁶

86. The difference between what a security’s price actually was at a point in time and what the price would have been absent the alleged fraud is “artificial inflation.”

87. The Supreme Court, in *Dura Pharmaceuticals, Inc. v. Broudo*, 544 U.S. 336 (S.Ct. 2005), clarified that recoverable damages are not the entire amount by which an investor overpaid for a security on account of fraud, which is the artificial inflation at the time of purchase, but rather how much of that artificial inflation was actually lost by the investor during their holding period.

⁸⁶ “Federal Securities Acts and Areas of Expert Analysis,” by Kevin Gold et al., Chapter 27 of the *Litigation Services Handbook: The Role of the Financial Expert*, 6th Edition, edited by Roman Weil et al., John Wiley & Sons, Inc., 2017, p. 27.6 (internal citations omitted).

Therefore, recoverable damages are the amount by which fraud-induced inflation dissipated after the investors' purchase, subject to certain statutory and case law limitations.⁸⁷

A. Artificial Inflation Ribbon

88. Artificial inflation is the difference between what a security's price actually was at a point in time, and what the price would have been absent the alleged fraud. An inflation ribbon is a time series indicating how much artificial inflation caused by the alleged fraud was in the security price on each day of the Class Period. When a security's price falls on account of a corrective disclosure, inflation dissipates. Inflation after such a corrective disclosure and significant price movement must be less than the inflation prior to the disclosure.

89. The record of significant residual security price reactions to the corrective disclosure allows one to observe how much total artificial inflation had been in the security price during the Class Period. The residual return, after accounting for potentially confounding information, measures how much artificial inflation in total exited the security price, and therefore also measures how much artificial inflation had previously been in the security price.

⁸⁷ In addition, the Private Securities Litigation Reform Act of 1995 provides the following limitation on damages:

“[T]he award of damages to the plaintiff shall not exceed the difference between the purchase or sale price paid or received, as appropriate, by the plaintiff for the subject security and the mean trading price of that security during the 90-day period beginning on the date on which the information correcting the misstatement or omission that is the basis for the action is disseminated to the market.”

15 U.S.C. § 78u-4(e) (1). For Class members who sell within that 90-day period, the limitation on damages is “the difference between the purchase or sale price paid or received” and “the mean trading price of the security during the period beginning immediately after dissemination of information correcting the misstatement or omission and ending on the date on which” the security is sold. 15 U.S.C. Section 78u-4(e) (2). Here, the mean per share trading price of FXCM common stock during the 90-days beginning on February 7, 2017 is \$2.33. FXCM common stock closing prices from February 7, 2017 through May 5, 2017 (the last trading day within the 90-day period) are presented in Exhibit-10. The mean volume weighted average price (“VWAP”) of FXCM Notes during the 90-days beginning on February 7, 2017 is \$30.42. FXCM VWAPs from February 7, 2017 through March 23, 2017 (the last trading day within the 90-day period) are presented in Exhibit-11. The Private Securities Litigation Reform Act damages limitation can be applied formulaically to the calculation of per share damages set forth below.

90. The inflation ribbon is often constructed by working chronologically backwards from the final corrective disclosure on February 6, 2017 (after the close of trading), and cumulating fraud-related residual price declines as they occurred. Using the fraud-related price declines on and after a corrective disclosure date to measure the amount of inflation that was in the security price prior to that date is a widely-used and generally accepted methodology.⁸⁸ The inflation just prior to a partially corrective disclosure must be the sum of the inflation the disclosure dissipated plus the inflation remaining afterward.

91. As detailed above, Lead Plaintiffs allege that Defendants made misrepresentations and omissions, stating that (1) they employed an agency-trading model and (2) this model eliminated conflicts of interest with their customers. In reality, FXCM was receiving most of the profits from the market maker capturing the highest proportion of its trading volume through its order flow relationship with Effex. The residual decline following the corrective disclosure, through which the market learned the truth about the Company's purportedly conflict-free agency model, and the ramifications associated therewith, including that Company's business model would no longer be sustainable and FXCM would be subject to regulatory repercussions, equals the diminution of value stemming from the market's new understanding of the truth of the Company's exposure to regulatory scrutiny, systemic shocks to its business model, its future profitability, and the market's prior underestimation of the risks of foreseeable ramifications had the truth been disclosed. Had analysts and investors been informed at any point during the Class Period of the Company's conflicted interest in the agency model, rather than learning through corrective disclosure, the price of FXCM Securities would have fallen during the Class Period

⁸⁸ For example, "Federal Securities Acts and Areas of Expert Analysis," by Kevin Gold et al., in Chapter 27 of the *Litigation Services Handbook: The Role of the Financial Expert*, 6th edition, edited by Roman Weil, Daniel Lentz, and Elizabeth Evans, John Wiley & Sons, Inc., 2017.

prior to corrective disclosure to reflect the effect of this adverse information and the associated ramifications.

1. Measuring Artificial Inflation During the Class Period

92. When corrective disclosures on February 6, 2017 (after the close of trading) informed the market that FXCM “engaged in false and misleading solicitations of FXCM’s retail foreign exchange (‘forex’) customers,” that the Company will have to pay a \$7 million fine to the CFTC, and that the Company will no longer be doing business in the United States due to the regulatory settlements, the market reacted by selling the Company’s securities and driving down their prices.⁸⁹ As the ramifications of these disclosure manifested, via withdrawing its business from the United States, CFTC fines, and analysts’ negative commentary, the price of FXCM securities fell. The \$3.39 per share of artificial inflation in FXCM common stock and \$16.31 per \$100 of par of artificial inflation in FXCM Notes, measured using FXCM Securities’ residual stock price declines following corrective disclosures, reflects the economic impact of these corrective disclosures and associated ramifications.

93. Exhibits-12 and Exhibit-13 presents the inflation ribbon for the FXCM Securities.

2. A Constant Dollar Inflation Ribbon Is Conservative

94. The design of the inflation ribbon can either be dollar-based or percent-based. For a dollar-based inflation ribbon, the dollar declines elicited by a corrective disclosure are determined to measure the dollar value of the disclosed information, which, *ceteris paribus*, represents the dollar value of the same information at other times during the class period. For a percent-based inflation ribbon, the percent dollar decline elicited by the corrective disclosure is

⁸⁹ “Order Instituting Proceedings Pursuant to Sections 6(c) And 6(d) of The Commodity Exchange Act, Making Findings, and Imposing Remedial Sanctions,” CFTC Docket No. 17-09, February 6, 2017.

determined to measure the percent effect on the security price of the same information at other points during the Class Period, *ceteris paribus*. If the security price trends downward over the course of the class period, then a constant percentage loss translates into bigger dollar losses when the constant percentage is multiplied against the earlier higher security prices.

95. For a number of reasons, a stable dollar-based ribbon is the more conservative inflation ribbon design in the instant case. The FXCM Securities' prices generally did trend downward over the course of the Class Period. The percentage declines on these lower stock prices would translate into dollar declines that are larger when applied to earlier higher security prices than were the actual dollar declines following corrective disclosure. Empirically observed declines elicited by disclosure at the end of the Class Period would therefore have had a bigger effect if the disclosure had occurred earlier. Estimating earlier valuation effects with the empirically observed dollar declines is therefore a conservative treatment.

B. Inflation Ribbon Summary

96. Artificial inflation in the price of the FXCM common stock during the Class Period was \$3.39 per share. Artificial inflation in the price of the FXCM Notes during the Notes Period was \$16.31 per \$100 of par.

C. Per Security Damages Formula

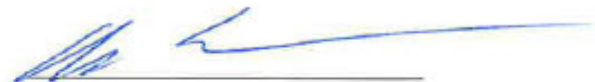
97. Based on the foregoing analysis and statutory formulas, Section 10(b) damages for FXCM common stock range up to \$3.39 per share, excluding prejudgment interest. Section 10(b) damages for FXCM Notes range up to \$16.31 per \$100 of par. A particular investor's per security damages depends on when during the Class Period each security was purchased and if and when each respective security was subsequently sold. Class members who sold their securities prior to a corrective event suffered no recoverable losses on those securities.

98. As an example of how per security damages are computed for a particular investor, consider an investor who purchased FXCM common stock on July 24, 2014 for \$141.60 per share and sold those shares at the close of trading on February 7, 2017 for \$3.45 per share. The inflation on July 24, 2014 was \$3.39 per share, and at the close of trading on February 7, 2017 it was zero. According to the change in inflation, this investor's economic/inflation loss is \$3.39 per share, equal to the decline in inflation over his/her holding period (\$3.39 minus \$0). The investment loss is \$138.15 per share, equal to the \$141.60 per share purchase price minus the \$3.45 per share sale price. The per share damages are the lesser of the economic/inflation loss and the investment loss, which is \$3.39 per share.

LIMITING FACTORS AND OTHER ASSUMPTIONS

99. My analysis and opinions are based on the information available as of the date of this report. Should any additional data or information become available subsequent to the submission of this report, I reserve the right to supplement or amend this report based on this new information.

Dated: April 21, 2021



Adam Werner, PhD
Affiliated Expert,
Crowninshield Financial Research

Exhibit-1
Curriculum Vitae
Adam Werner, Ph.D.

EDUCATION

1998	Northwestern University, Kellogg Graduate School of Management Ph.D. in Finance
1992	Oberlin College B.A. in Economics

TEACHING EXPERIENCE

2014 – Present	Cal Poly San Luis Obispo Orfalea College of Business San Luis Obispo, CA Lecturer in Economics
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BUSINESS EXPERIENCE

2018 – Present	Pismo Beach Planning Commission
2015 – Present	Crowninshield Financial Research
2009 – 2015	Gnarus Advisors/Berkeley Economic Consulting
2008 – 2009	LitiNomics
2004 – 2008	CRA International
2000 – 2003	National Economic Research Associates, Inc.
1998 – 2000	Cornerstone Research
1992 – 1993	Federal Reserve Bank

PAPERS AND PUBLICATIONS

“The Impact of Underwriter Reputation on Equity Offering: An Empirical Study.”
Thesis, 1999.

“The Long-Run Performance of Underwriters and its Impact on Seasoned Equity Offerings.” 1999.

“Dynamic Measures of Underwriter Reputation: A Study of IPO’s.” 1999.

“CAFE Economics: A Note on the Limits and Effectiveness of Fuel Economy Regulation.” With Stephen Sheppard, 1992.

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“Trading Models Underestimate Securities Class Damages.” with Narinder Walia, Law360, 2019.

“More ‘Dark Pools’ Deepen Litigation Issues.” Law360, 2013.

“Recent Trends in Securities Class Action Litigation: Will Enron and Sarbanes-Oxley Change the Tides.” with Elaine Buckberg, Todd Foster and Ronald Miller, 2003.

“The Effects of the PSLRA and Subsequent Events on Securities Litigation.” With Fred Dunbar and Todd Foster, prepared for the New York City Bar Association, 2003.

“The Energy Tax: Who Pays?” joint with Mark Schweitzer, in Federal Reserve Bank of Cleveland’s Economic Commentary, 1993.

PRESENTATIONS

“Cause or Effect: Are Settlement Statistics Driving Down Settlements?” Presentation to Robbins Geller Rudman & Dowd, LLP in San Diego, CA on October 10, 2013, Wolf Popper, LLP in New York, NY on September 18, 2013, Abraham, Fruchter & Twersky, LLP in New York, NY on September 17, 2013, Robbins Geller Rudman & Dowd, LLP in Melville, NY on September 11, 2013, Entwistle & Cappucci, LLP in New York, NY on September 10, 2013, and Faruqi & Faruqi, LLP in New York, NY on September 10, 2013.

“The Economics of Securities Litigation.” Sidley & Austin in Los Angeles, CA on March 14, 2007.

“The Global Cost of Capital.” Panel discussion on valuing assets in foreign countries at the University of Texas School of Law VALCON conference in Las Vegas on February 8, 2007.

“Economic Damages in Securities Fraud Matters.” NERA Luncheon Seminars with Alan Cox given at the Fifth Avenue Suites Hotel in Portland, OR on November 19, 2002 and at the W Hotel in Seattle, WA on November 20, 2002.

“Shareholder Class Actions: Calculation of Damages.” Presentation to Skadden, Arps, Slate, Meagher & Flom, LLP in San Francisco, CA on October 30, 2002, Marsh FINPRO in San Francisco, CA on September 18, 2002, Marsh Risk & Insurance Services in San Diego, CA on September 17, 2002 and Marsh FINPRO in Los Angeles, CA on September 13, 2002.

“Capital Formation: Class Action Litigation and Prevention.” Speech and panel discussion focusing on securities class action litigation, which sometimes arise from

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initial public offerings and/or market volatility in the aftermarket. Presented at the 2002 CALBIO Summit in San Diego, CA on April 23, 2002.

“Shareholder Class Actions after the NASDAQ Bubble.” Speech given to the Securities Litigation Sub-Committee of the Colorado Bar Association at Holland & Hart, LLP in Denver, CO on April 17, 2002.

“Trends in Litigation: How Claims and Losses Are Valued.” Speech at the American Bankers Association Insurance Risk Management Annual Conference in San Diego, CA on February 4, 2002.

“Recent Trends in Securities Litigation.” “Basic Economic Analysis in Securities Class Action” and “Challenging the Efficient Market Assumption in Securities Class Action Matters.” presented to Cooley Godward in San Diego, CA on November 28, 2001. “Recent Trends in Securities Litigation.” presentation with Marcia Mayer given at Howard, Rice, Nemerovski, Canady, Falk & Rabkin in San Francisco, CA on November 27, 2001.

“Recent Trends in Securities Litigation.” presentation given to Marsh USA in Denver, CO on November 8, 2001, and Thelen, Reid & Priest in Los Angeles, CA on November 6, 2001.

“Financial Economics in Litigation.” speech presented to Simpson, Thacher & Bartlett in Palo Alto, CA on July 31, 2001, Baker & McKenzie in San Diego, CA on July 18, 2001, Brobeck, Phleger & Harrison in San Francisco, CA on June 25, 2001 and to Latham & Watkins in San Francisco, CA on June 26, 2001.

“Economic Analysis in Securities Fraud Cases.” Speech with Alan Cox delivered to Morrison & Forester, San Francisco, CA on July 25, 2001.

“Recent Trends: Shareholder Class Actions Five Years After the PSLRA.” speech presented to Shearman & Sterling in San Francisco, CA on May 23, 2001, O’Melveny & Myers in Los Angeles, CA on May 30, 2001 and Gray, Cary, Ware & Freidenrich in San Diego, CA on June 6, 2001.

EXPERT REPORTS AND TESTIMONY

George Barney, et al. v. Nova Lifestyle, Inc., et al. Issued a declaration on market efficiency (2021) in a securities class action (District of California).

Peter Voulgaris, et al. v. Array Biopharma Inc., et al. Issued a declaration on market efficiency (2021) and provided deposition testimony (2021) in a securities class action (District of Colorado).

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In re Innocoll Holdings Public Limited Company Securities Litigation. Issued a report (2020), provided deposition testimony (2020) on market efficiency, and issued a rebuttal report (2020) in a securities class action (U.S.D.C. Eastern District of Pennsylvania).
Michael Tietz, et al. v. Cryobloc Technologies Corp., et al. Issued a report on price impact in a securities class action (Supreme Court of British Columbia, 2020).

In re Global Brokerage, Inc. f/k/a/ FXCM Inc. Issued a report (2020), a rebuttal report (2020), provided deposition testimony (2020) and testified (2020) on market efficiency in a securities class action (U.S.D.C. Southern District of New York).

In re Horsehead Holding Corp. Securities Litigation. Issues a report (2020) and provided deposition testimony (2020) on market efficiency in a securities class action (U.S.D.C. District of Delaware).

Bing Li, et al. v. Aeterna Zentaris, Inc., et al. Issued a declaration (2016), a report (2017), and provided deposition testimony (2017) on market efficiency in a securities class action. Issued a declaration (2019) a reply report (2019), and provided deposition testimony (2020) on loss causation and damages (U.S.D.C. District of New Jersey).

In re Patriot National Inc. Securities Litigation. Issued a declaration (2019) and a supplemental declaration (2019) on damages in a securities class action (U.S.D.C. Southern District of New York).

Hamza Ramzan, et al. v. GDS Holdings Limited, et al. Issued a declaration on NASDAQ microstructure in a securities class action (U.S.D.C. Eastern District of Texas, Marshall Division, 2019).

Ivan Nibur, et al. v. SandRidge Mississippian Trust I, et al. Issued a declaration (2018), a reply declaration (2018), a supplemental reply declaration (2018), and provided deposition testimony (2018) on market efficiency in a securities class action. Issued a declaration (2019) a rebuttal declaration (2019), and provided deposition testimony (2019) on loss causation and damages (U.S.D.C. Western District of Oklahoma).

In Re Insys Therapeutics, Inc. Securities Litigation. Issued a report on market efficiency in a securities class action (U.S.D.C. Southern District of New York, 2019).

In Re Spectrum Pharmaceuticals, Inc. Securities Litigation. Issued a declaration (2019) and provided deposition testimony (2019) on market efficiency in a securities class action (U.S.D.C. District of Nevada).

Amanda Beezley et al. v. Fenix Parts, Inc., et al. Issued a declaration on market efficiency in a securities class action (U.S.D.C. Northern District of Illinois, Eastern Division, 2019).

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Michael Desta, et al. v. Volkswagen Aktiengesellschaft, et al. Issued a declaration regarding benefits to firms that have ADRs listed in a securities class action (U.S.D.C. Eastern District of New York, 2018).

Michael Desta, et al. v. Wins Finance Holdings Inc., et al. Issued a declaration (2018) and provided deposition testimony (2018) on market efficiency in a securities class action (U.S.D.C. Central District of California).

Andrew Meyer, et al. v. Concordia International Corp., et al. Issued a declaration (2018), a reply declaration (2018), and provided deposition testimony (2018) on market efficiency in a securities class action. Issued a declaration (2018), a reply declaration (2018), and provided deposition testimony (2018) on loss causation and damages (U.S.D.C. Southern District of New York).

In re: K12 Securities Litigation. Issued a declaration (2018) and provided deposition testimony (2018) on market efficiency in a securities class action (U.S.D.C. Northern District of California).

Robert Colman, et al. v. Theranos, Inc., et al. Issued a declaration on damage methodology and price impact in a securities class action (U.S.D.C. Northern District of California, San Jose Division, 2018).

In re: CytRx Corporation Securities Litigation. Issued a declaration (2017) and provided deposition testimony (2018) regarding market efficiency in a securities class action (U.S.D.C. Central District of California).

Lord Abbett Affiliated Fund, Inc., et al. v. American International Group, Inc. Issued a report regarding market efficiency, loss causation, and damages in a securities case (U.S.D.C. Southern District of New York, 2017).

Xiaolin Chi, et al. v. Qiao Xing Universal Resources, Inc., et al. Issued a report on damages in a securities class action (District Court of the Virgin Islands, St. Croix Division, 2017).

John Hosey v. Twitter, Inc., et al. Issued a declaration (2017) and provided deposition testimony (2017) regarding rebuttal to Defendants' Motion for Summary Judgement in a securities class action (Superior Court of the State of California, County of San Mateo).

Gwyn R. Hartman Revocable Living Trust v. Southern Michigan Bancorp, Inc. et al. Issued a report on damages arising from alleged exclusions in a proxy solicitation (U.S.D.C. Western District of Michigan, 2017).

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Fred Kelsey, et al. v. Textura Corporation, et al. Issued a declaration (2017) and provided deposition testimony (2017) on market efficiency in a securities class action (U.S.D.C. Northern District of Illinois).

Dave Carlton, et al. v. Fred Cannon. Issued a declaration on market efficiency in a securities class action (U.S.D.C. Southern District of Texas, Houston Division, 2016).

James Middlemiss v. Penn West Petroleum LTD., et al. Issued a report on damages in a securities class action (Superior Court of Justice Ontario, Canada, 2016).

David Loritz, et al. v. Exide Technologies, et al. Issued a report on damages and loss causation in a securities class action (U.S.D.C. Central District of California, 2015)

Manishkumar Khunt, et al. v. Alibaba Group Holding Limited, et al. Issued a declaration on potential investor damages in a securities class action (U.S.D.C. Southern District of New York, 2015).

Biotechnology Value Fund, L.P. et al. v. Celera Corporation et al. Issued a report (2014), a reply report (2014), a supplemental report (2014), and provided deposition testimony (2014) on damages arising from a merger (U.S.D.C. Northern District of California).

In re: Hi-Crush Partners L.P. Securities Litigation. Issued a declaration (2014), a supplemental declaration (2014), and provided deposition testimony (2014) regarding market efficiency in a securities class action (U.S.D.C. Southern District of New York).

Ian Mausner v. MarketByte LLC, et al. Issued a declaration about investment advisor incentives and liquidity needs in a securities class action (U.S.D.C. Southern District of California, 2014).

Artes Medical, Inc. v. Lemperle et al. Provided deposition testimony on behalf of defendants about alleged damages caused by a proxy contest (Superior Court of the State of California, County of San Diego, Central District, 2013).

In re: Ebix Inc. Securities Litigation. Issued a declaration (2012) and provided deposition testimony (2013) regarding market efficiency in a securities class action (U.S.D.C. Northern District of Georgia, Atlanta Division).

Erik Poole and William Rhody v. Alange Energy Corp., et al. Issued a report (2012) and a reply report (2013) on market efficiency and damages in a securities class action (Superior Court of Justice Ontario, Canada).

In re: Hecla Mining Securities Litigation. Issued a declaration on investor losses in a securities class action (U.S.D.C. District of Idaho, 2012).

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Mark Henning, Roman Zaretski and Chrisitan Stillmark v. Orient Paper, Inc. et al. Issued a declaration (2011), a supplemental declaration (2012) and provided deposition testimony (2012) regarding market efficiency in a securities class action (U.S.D.C. Central District of California).

Carlos Munoz et al. v. China Expert Technology, Inc., et al. Issued a declaration (2012), a supplemental declaration (2012) and provided deposition testimony (2012) in a securities class action regarding market efficiency (U.S.D.C. Southern District of New York).

Theodore Dean, et al. v. China Agritech, Inc., et al. Issued a declaration (2012), a supplemental declaration (2012) and provided deposition testimony (2012) in a case regarding market efficiency in a securities class action (U.S.D.C. Central District of California).

Robert Michael Shenk, Derivatively on Behalf of Sirius XM Radio Inc. v. Melvin Alan Karmazin, et al. Issued an expert report (2011), a supplemental expert report (2012) and provided deposition testimony (2012) in a case involving damages in a shareholder derivative matter (U.S.D.C. Southern District of New York).

Pathway Investments Pty Ltd and Doystoy Pty Ltd v. National Australia Bank Ltd. Submitted a report on survey techniques, the efficient market hypothesis and liquidity in a securities class action (Supreme Court of Victoria at Melbourne, Australia, Commercial and Equity Division, Commercial Court, 2012).

Bruce Simmonds, Robert Grant and Gordon Moore v. Armtec Infrastructure Inc. et al. Issued a report on market efficiency and damages in a securities class action (Superior Court of Justice Ontario, Canada, 2011).

In re: BP plc. Securities Litigation. Issued a declaration regarding damages and materiality in a securities class action (U.S.D.C. Southern District of Texas, Houston Division, 2010).

In re: Tripath Technology Inc., Debtor. Issued a report (2009) and provided deposition testimony (2010) regarding damages arising from Directors' and Officers' breach of fiduciary duty in bankruptcy court (U.S.D.C. Northern District of California, San Jose Division).

David Ainslie and Muriel Marentette v. CV Technologies et al. Issued a report estimating damages in a securities class action (Superior Court of Justice, Ontario, Canada, 2010).

Harry Stackhouse, on Behalf of Himself and All Others Similarly Situated v. Toyota Motor Corporation, et al. Issued a declaration regarding the relationship between

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Toyota's U.S. stock price and Japanese stock price in a securities class action (U.S.D.C. Central District of California, 2010).

Phillip Elliot and William Kormos v. NovaGold Resources Inc., et al. Issued a declaration in a securities class action regarding trading volume in the U.S. versus Canada. (Superior Court of Justice, Ontario, Canada, 2010).

International Arbitration between a private equity firm and Chinese biotech company. Issued a report (2008) and testified (2009) before an International Arbitration Committee regarding the value of a private equity investment.

Arbitration between Albert Richards and Old Republic Title Insurance. Deposed regarding estimated damages incurred by plaintiff as a result of a forced sale of Russian securities due to Old Republic's breach of contract (2008).

Californians United for a Responsible Budget, et al., v. California State Public Works Board, et al. Issued a report on the cost of issuing revenue bonds to fund California prison expansion (The Superior Court for the State of California, County of Sacramento, 2008).

Arbitration between Daniel Lyons and Morgan Lyons, and Chinese Hospital Association and Sam English. Deposed regarding plaintiffs' calculated damages arising from asbestos exposure for plaintiff (2003).

ENGAGEMENTS

Securities and Finance

In re: China Medicine Corporation Securities Litigation. Retained by class counsel to estimate damages and determine market efficiency in a securities class action.

In re: Citigroup Inc. Securities Litigation. Testified as to damages and inflation in a securities class action.

In re: Bank of America Corp. Securities, Derivative, and Employee Retirement Income Security Act (ERISA) Litigation. Retained by class counsel as damages expert in a derivative securities class action.

Government of Guam Retirement Fund et al. v Countrywide Financial Corp, et al. Retained by class counsel to estimate damages in a securities class action.

Keith Cohn v. Sanford C. Bernstein & Co., LLC and Alliance Bernstein LP. Retained by client to testify on portfolio risk in a FINRA arbitration.

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In re: Semgroup Energy Partners, L.P., Securities Litigation. Retained by Plaintiffs to estimate damages in a securities class action.

Asbestos Workers Philadelphia Pension Fund v. Merix Corporation, et al. Retained by Plaintiffs to evaluate fairness of merger between Merix and Viasystems.

Retained by Goldman Sachs to provide consulting on the IPO process, the valuation of securities at IPO and the possible impact of “tie-in” agreements on the pricing of IPOs for the purpose of analyzing class certification and damages.

Joseph Phelps Vineyards, Inc., et al., v Craig Williams, et al. Retained by Joseph Phelps Vineyards to estimate the value of the winery as part of arbitration.

UnitedHealth Group Option Backdating Investigation. Retained by a Special Litigation Committee formed by UnitedHealth Group’s board of directors to estimate harm caused by company’s decision to backdate options.

SEC v. Henry Nicholas, et al. Retained by founder of Broadcom to estimate harm caused by company’s decision to backdate options.

Enrico Bondi on behalf of Parmalat S.p.A. v. Bank of America et al. Hired by Bank of America to rebut damage arguments regarding Bank of America’s role in Parmalat’s eventual bankruptcy.

Capital Trading Co. v. Conor Medsystems. Retained to analyze a fairness opinion issued by Citigroup regarding the price offered by Johnson & Johnson to acquire Conor.

Enron Solvency. Retained by the surviving Enron Corporation to estimate the value of its assets for litigation purposes.

SEC v. Spear Leeds Kellogg (Goldman Sachs.) et al. Estimated damages associated with trading ahead allegations made by the SEC on behalf of Goldman market makers on the New York Stock Exchange, American Stock Exchange, Philadelphia Stock Exchange and the Chicago Board of Options Exchange.

General Fire and Casualty co. et al. v. Guy Carpenter and Co., Inc. Hired by defendant to rebut allegations that it had given incorrect advice to the plaintiff regarding reinsurance contracts.

R.D. Hubbard v. Pinnacle Entertainment, Inc. Analyzed the value of options granted and later rescinded on behalf of our client, the defendant.

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Thomas Slemmer, et al. v. Cucamonga Valley Water District, et al. Estimated the value of restricted stock in a mutual water company.

Department of Labor v. Genuity (investigation). Assisted Genuity in an investigation by the Department of Labor as to whether or not Genuity stock was a safe investment for Genuity's pension fund. Investigation was dismissed.

Jason Stanley, et al. v. Safeskin Corporation, et al. Estimated damages and consulted on materiality for defendant in a securities class action.

Nanogen, Inc. v. Donald D. Montgomery and CombiMatrix Corporation. Estimated damages for defendant in cross complaint over a failed IPO resulting from plaintiff's claims of patent infringement in genomic industry.

Conseco, Inc. Securities Litigation. Retained by defendants to calculate damages in a securities class action matter.

Madison/OHI Liquidity Investors, LLC v. Omega Healthcare Investors. Estimated damages to Madison's investment funds as a result of the early termination of a debt facility.

Barbara Rosen, et al. v. Macromedia, Inc., et al. Prepared rebuttal analyses in securities class action suit on behalf of Macromedia.

Karen Yarborough v. PeopleSoft, Inc. and Does 1-20. Calculated value of stock option package in wrongful termination suit on behalf of PeopleSoft.

Michael Carabetta v. Novadigm, Inc., et al. Did analysis of damages to a former company insider on behalf of Novadigm. Estimated value of lost options and salary.

Allen T. Gilliland Trust, et al. v. H&F MobileMedia Partners, LLC, et al. Engaged by auditors to analyze plaintiffs' decision to affirm a prior transaction.

California Federal Bank v. United States. Estimated damages caused by government in breach of contract case on behalf of Cal Fed.

LaSalle Talman v. United States. Estimated damages caused by government in breach of contract case on behalf of LaSalle Talman.

Intellectual Property

Transocean v. Maersk. Retained by Maersk to defend claims of patent infringement in case involving oil drilling technology.

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Abbott Laboratories, et al. v. Sandoz, Inc. Retained on behalf of Abbott to estimate patent infringement damages as a result of Sandoz's decision to introduce a generic drug prior to the expiration of a patent.

LG Phillips LCD Co., LTD v. Tatung, Chunghwa Picture Tubes, et al. Provided rebuttal analysis for defendants in a patent infringement case dealing with LCD technology.

PostX Corporation v. Secure Data in Motion, Inc. d/b/a/ Sigaba Corporation. Calculated damages arising from tortuous interference and patent infringement in the secure document delivery market. Client was victorious on both complaint and cross-complaint.

Larkspur Data Resources, Inc. v. Trust Administrators, et al. Assisted plaintiff in calculating damages in trademark and copyright infringement case involving proprietary databases.

Dioptics Medical Products, Inc. v. The Cooper Companies, Inc.; CooperVision, Inc.; A. Thomas Bender; and Does 1-15. Retained by plaintiff to calculate damages in a copyright infringement case over naming of eyewear.

Intel Corporation v. Broadcom Corporation. Retained by Broadcom to estimate damages alleged by Intel based on charges of patent infringement.

Australia Vision Services Pty. Ltd. v. Dioptics Medical Products, Inc., Henry Lane, and individual, and Does 1-10. Estimated profits lost by Dioptics as a result of a competitor's allegations of patent infringement.

American Booksellers Association, Inc. v. Barnes & Noble, et al. Worked on analysis of publisher discounts and analysis of openings and closings of bookstores on behalf of Borders.

Exhibit-2
Documents Considered in Addition to those
Cited in My Previous Reports

CASE DOCUMENTS

- Third Amended Consolidated Securities Class Action Complaint, filed April 17, 2020.

ACADEMIC AND PROFESSIONAL LITERATURE

- Cheng, C. S. Agnes et al., “Shareholder Rights, Financial Disclosure and the Cost of Equity Capital,” *Review of Quantitative Finance and Accounting*, 2006.
- Gillet, Roland et al., “Operational Risk and Reputation In The Financial Industry,” *Journal of Banking & Finance*, 2009.
- Gold, Kevin et al., “Federal Securities Acts and Areas of Expert Analysis,” in Chapter 27 of the *Litigation Services Handbook: The Role of the Financial Expert*, 6th ed., edited by Roman Weil, Daniel Lentz, and Elizabeth Evans, John Wiley & Sons, Inc., 2017.
- Karpoff, Jonathan et al. “The Cost to Firms of Cooking the Books,” *Journal of Financial and Quantitative Analysis*, 2008.
- Kothari, S.P. et al., “The Effect of Disclosures by Management, Analysts, and Business Press on Cost of Capital, Return Volatility, and Analyst Forecasts: A Study Using Content Analysis” by *The Accounting Review*, 2009.
- MacKinlay, A. Craig, “Event Studies in Economics and Finance,” *Journal of Economic Literature*, March 1997.
- Palmrose, Zoe-Vonna et al., “Determinants of Market Reactions to Restatement Announcements,” *Journal of Accounting & Economics*, 2004.

OTHER

- Any other documents and data cited in the report.

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	FXCM Closing Price	Logarithmic Return
3/15/2012	\$123.80	4.97%
3/16/2012	\$122.80	-0.81%
3/19/2012	\$122.70	-0.08%
3/20/2012	\$126.70	3.21%
3/21/2012	\$125.50	-0.95%
3/22/2012	\$130.10	3.60%
3/23/2012	\$133.30	2.43%
3/26/2012	\$135.00	1.27%
3/27/2012	\$134.90	-0.07%
3/28/2012	\$134.50	-0.30%
3/29/2012	\$131.70	-2.10%
3/30/2012	\$129.90	-1.38%
4/2/2012	\$131.10	0.92%
4/3/2012	\$134.20	2.34%
4/4/2012	\$130.00	-3.18%
4/5/2012	\$131.70	1.30%
4/9/2012	\$126.50	-4.03%
4/10/2012	\$119.20	-5.94%
4/11/2012	\$120.90	1.42%
4/12/2012	\$120.00	-0.75%
4/13/2012	\$118.00	-1.68%
4/16/2012	\$118.30	0.25%
4/17/2012	\$119.30	1.34%
4/18/2012	\$116.90	-2.03%
4/19/2012	\$116.60	-0.26%
4/20/2012	\$117.00	0.34%
4/23/2012	\$116.50	-0.43%
4/24/2012	\$116.00	-0.43%
4/25/2012	\$116.00	0.00%
4/26/2012	\$115.30	-0.61%
4/27/2012	\$115.30	0.00%
4/30/2012	\$115.80	0.43%
5/1/2012	\$114.00	-1.57%
5/2/2012	\$112.60	-1.24%
5/3/2012	\$111.50	-0.98%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	FXCM Closing Price	Logarithmic Return
5/4/2012	\$109.10	-2.18%
5/7/2012	\$108.00	-1.01%
5/8/2012	\$106.40	-1.49%
5/9/2012	\$104.00	-2.28%
5/10/2012	\$100.20	-3.72%
5/11/2012	\$100.20	0.00%
5/14/2012	\$98.30	-1.91%
5/15/2012	\$98.90	0.61%
5/16/2012	\$99.90	1.01%
5/17/2012	\$99.00	-0.90%
5/18/2012	\$97.00	-2.04%
5/21/2012	\$96.70	-0.31%
5/22/2012	\$95.80	-0.94%
5/23/2012	\$97.50	1.76%
5/24/2012	\$97.70	0.20%
5/25/2012	\$100.40	2.73%
5/29/2012	\$102.00	1.58%
5/30/2012	\$100.90	-1.08%
5/31/2012	\$102.80	1.87%
6/1/2012	\$101.30	-1.47%
6/4/2012	\$101.80	0.49%
6/5/2012	\$102.00	0.20%
6/6/2012	\$105.30	3.18%
6/7/2012	\$110.10	4.46%
6/8/2012	\$112.10	1.80%
6/11/2012	\$111.50	-0.54%
6/12/2012	\$118.20	5.84%
6/13/2012	\$115.90	-1.97%
6/14/2012	\$124.10	6.84%
6/15/2012	\$121.00	-2.04%
6/18/2012	\$119.40	-1.33%
6/19/2012	\$117.00	-2.03%
6/20/2012	\$109.60	-6.53%
6/21/2012	\$106.40	-2.96%
6/22/2012	\$109.60	2.96%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	FXCM Closing Price	Logarithmic Return
6/25/2012	\$108.00	-1.47%
6/26/2012	\$111.90	3.55%
6/27/2012	\$116.80	4.29%
6/28/2012	\$116.40	-0.34%
6/29/2012	\$117.60	1.03%
7/2/2012	\$119.50	1.60%
7/3/2012	\$120.00	0.42%
7/5/2012	\$119.70	-0.25%
7/6/2012	\$118.30	-1.18%
7/9/2012	\$115.50	-2.40%
7/10/2012	\$116.20	0.60%
7/11/2012	\$116.40	0.17%
7/12/2012	\$109.90	-5.75%
7/13/2012	\$111.20	1.18%
7/16/2012	\$113.10	1.69%
7/17/2012	\$110.70	-2.14%
7/18/2012	\$109.80	-0.82%
7/19/2012	\$109.20	-0.55%
7/20/2012	\$104.20	-4.69%
7/23/2012	\$102.00	-2.13%
7/24/2012	\$106.10	3.94%
7/25/2012	\$104.60	-1.42%
7/26/2012	\$105.70	1.05%
7/27/2012	\$105.90	0.19%
7/30/2012	\$106.60	0.66%
7/31/2012	\$105.00	-1.51%
8/1/2012	\$104.80	-0.19%
8/2/2012	\$104.50	-0.29%
8/3/2012	\$108.00	3.29%
8/6/2012	\$107.60	-0.37%
8/7/2012	\$108.70	1.02%
8/8/2012	\$107.00	-1.58%
8/9/2012	\$101.60	-5.18%
8/10/2012	\$98.10	-3.51%
8/13/2012	\$96.50	-1.64%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	FXCM Closing Price	Logarithmic Return
8/14/2012	\$98.10	1.64%
8/15/2012	\$98.20	0.10%
8/16/2012	\$99.10	0.91%
8/17/2012	\$99.70	0.60%
8/20/2012	\$97.30	-2.44%
8/21/2012	\$96.90	-0.41%
8/22/2012	\$96.40	-0.52%
8/23/2012	\$95.00	-1.46%
8/24/2012	\$94.80	-0.21%
8/27/2012	\$93.20	-1.70%
8/28/2012	\$86.00	-8.04%
8/29/2012	\$90.10	4.66%
8/30/2012	\$89.30	-0.89%
8/31/2012	\$87.60	-1.92%
9/4/2012	\$87.60	0.00%
9/5/2012	\$88.00	0.46%
9/6/2012	\$90.70	3.02%
9/7/2012	\$92.70	2.18%
9/10/2012	\$92.50	-0.22%
9/11/2012	\$92.50	0.00%
9/12/2012	\$93.40	0.97%
9/13/2012	\$99.00	5.82%
9/14/2012	\$98.30	-0.71%
9/17/2012	\$97.20	-0.51%
9/18/2012	\$97.40	0.21%
9/19/2012	\$95.10	-2.39%
9/20/2012	\$95.60	0.52%
9/21/2012	\$96.50	0.94%
9/24/2012	\$96.80	0.31%
9/25/2012	\$96.00	-0.83%
9/26/2012	\$95.80	-0.21%
9/27/2012	\$97.20	1.45%
9/28/2012	\$95.50	-1.76%
10/1/2012	\$96.30	0.83%
10/2/2012	\$100.90	4.67%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	FXCM Closing Price	Logarithmic Return
10/3/2012	\$97.80	-3.12%
10/4/2012	\$102.00	4.20%
10/5/2012	\$95.90	-6.17%
10/8/2012	\$95.60	-0.31%
10/9/2012	\$93.80	-1.90%
10/10/2012	\$94.30	0.53%
10/11/2012	\$94.70	0.42%
10/12/2012	\$92.00	-2.89%
10/15/2012	\$91.60	-0.44%
10/16/2012	\$89.60	-2.21%
10/17/2012	\$94.30	5.11%
10/18/2012	\$91.30	-3.23%
10/19/2012	\$89.80	-1.66%
10/22/2012	\$92.30	2.75%
10/23/2012	\$90.80	-1.64%
10/24/2012	\$89.60	-1.33%
10/25/2012	\$90.30	0.78%
10/26/2012	\$90.30	0.00%
10/31/2012	\$90.00	-0.33%
11/1/2012	\$91.10	1.21%
11/2/2012	\$90.10	-1.10%
11/5/2012	\$90.10	0.00%
11/6/2012	\$89.60	-0.56%
11/7/2012	\$90.30	0.78%
11/8/2012	\$94.90	4.97%
11/9/2012	\$91.30	-3.87%
11/12/2012	\$96.50	5.54%
11/13/2012	\$94.60	-1.99%
11/14/2012	\$92.70	-2.03%
11/15/2012	\$96.70	4.22%
11/16/2012	\$94.50	-2.30%
11/19/2012	\$97.70	3.33%
11/20/2012	\$95.90	-1.86%
11/21/2012	\$93.90	-2.11%
11/23/2012	\$96.50	2.73%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	FXCM Closing Price	Logarithmic Return
11/26/2012	\$97.90	1.44%
11/27/2012	\$100.90	3.02%
11/28/2012	\$102.10	1.18%
11/29/2012	\$103.90	1.75%
11/30/2012	\$100.10	-3.73%
12/3/2012	\$100.20	0.10%
12/4/2012	\$100.20	0.00%
12/5/2012	\$99.20	-1.00%
12/6/2012	\$100.00	0.80%
12/7/2012	\$101.50	1.49%
12/10/2012	\$101.40	-0.10%
12/11/2012	\$101.40	0.00%
12/12/2012	\$101.20	-0.20%
12/13/2012	\$99.30	-1.90%
12/14/2012	\$100.00	0.70%
12/17/2012	\$100.10	0.70%
12/18/2012	\$99.90	-0.20%
12/19/2012	\$97.50	-2.43%
12/20/2012	\$100.30	2.83%
12/21/2012	\$98.30	-2.01%
12/24/2012	\$98.10	-0.20%
12/26/2012	\$97.60	-0.51%
12/27/2012	\$96.40	-1.24%
12/28/2012	\$97.00	0.62%
12/31/2012	\$100.70	3.74%
1/2/2013	\$106.70	5.79%
1/3/2013	\$105.00	-1.61%
1/4/2013	\$105.10	0.10%
1/7/2013	\$106.30	1.14%
1/8/2013	\$107.60	1.22%
1/9/2013	\$105.30	-2.16%
1/10/2013	\$107.50	2.07%
1/11/2013	\$111.40	3.56%
1/14/2013	\$112.80	1.25%
1/15/2013	\$113.90	0.97%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	FXCM Closing Price	Logarithmic Return
1/16/2013	\$111.30	-2.31%
1/17/2013	\$111.00	-0.27%
1/18/2013	\$110.40	-0.54%
1/22/2013	\$112.20	1.62%
1/23/2013	\$112.50	0.27%
1/24/2013	\$114.60	1.85%
1/25/2013	\$117.20	2.24%
1/28/2013	\$119.90	2.28%
1/29/2013	\$118.40	-1.26%
1/30/2013	\$120.40	1.68%
1/31/2013	\$119.90	-0.42%
2/1/2013	\$124.00	3.36%
2/4/2013	\$128.10	3.25%
2/5/2013	\$130.00	1.47%
2/6/2013	\$131.30	1.00%
2/7/2013	\$130.90	-0.31%
2/8/2013	\$132.30	1.06%
2/11/2013	\$133.00	0.53%
2/12/2013	\$137.30	3.18%
2/13/2013	\$136.20	-0.80%
2/14/2013	\$137.30	0.80%
2/15/2013	\$135.10	-1.62%
2/19/2013	\$135.30	0.15%
2/20/2013	\$135.60	0.22%
2/21/2013	\$133.20	-1.79%
2/22/2013	\$133.20	0.00%
2/25/2013	\$134.10	0.67%
2/26/2013	\$133.50	-0.45%
2/27/2013	\$131.80	-1.28%
2/28/2013	\$131.50	-0.23%
3/1/2013	\$134.00	1.88%
3/4/2013	\$133.60	-0.30%
3/5/2013	\$133.20	-0.30%
3/6/2013	\$136.20	2.23%
3/7/2013	\$135.00	-0.88%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	Closing Price	Logarithmic Return
3/8/2013	\$135.50	0.37%
3/11/2013	\$140.70	3.77%
3/12/2013	\$140.70	0.00%
3/13/2013	\$141.60	0.64%
3/14/2013	\$142.50	0.63%
3/15/2013	\$140.50	-0.99%
3/18/2013	\$141.00	0.36%
3/19/2013	\$139.90	-0.78%
3/20/2013	\$141.00	0.78%
3/21/2013	\$136.50	-3.24%
3/22/2013	\$137.80	0.95%
3/25/2013	\$135.90	-1.39%
3/26/2013	\$134.20	-1.26%
3/27/2013	\$134.60	0.30%
3/28/2013	\$136.80	1.62%
4/1/2013	\$132.50	-3.19%
4/2/2013	\$134.30	1.35%
4/3/2013	\$130.30	-3.02%
4/4/2013	\$134.40	3.10%
4/5/2013	\$130.10	-3.25%
4/8/2013	\$133.90	2.88%
4/9/2013	\$136.20	1.70%
4/10/2013	\$139.20	2.18%
4/11/2013	\$139.50	0.22%
4/12/2013	\$139.50	0.00%
4/15/2013	\$130.90	-6.36%
4/16/2013	\$135.10	3.16%
4/17/2013	\$131.80	-2.47%
4/18/2013	\$131.40	-0.30%
4/19/2013	\$133.90	1.88%
4/22/2013	\$134.30	0.30%
4/23/2013	\$136.80	1.84%
4/24/2013	\$137.10	0.22%
4/25/2013	\$134.60	-1.84%
4/26/2013	\$133.00	-1.20%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM Closing Price	FXCM
		Logarithmic Return
4/29/2013	\$135.00	1.49%
4/30/2013	\$135.50	0.37%
5/1/2013	\$131.40	-3.07%
5/2/2013	\$132.60	0.91%
5/3/2013	\$135.90	2.46%
5/6/2013	\$137.00	0.81%
5/7/2013	\$141.50	3.23%
5/8/2013	\$142.50	0.70%
5/9/2013	\$142.80	0.21%
5/10/2013	\$145.00	1.53%
5/13/2013	\$148.00	2.05%
5/14/2013	\$149.20	0.81%
5/15/2013	\$149.50	0.20%
5/16/2013	\$148.20	-0.87%
5/17/2013	\$146.90	-0.88%
5/20/2013	\$148.10	0.81%
5/21/2013	\$146.70	-0.95%
5/22/2013	\$145.90	-0.55%
5/23/2013	\$146.00	0.07%
5/24/2013	\$147.20	0.82%
5/28/2013	\$141.60	-3.88%
5/29/2013	\$140.60	-0.71%
5/30/2013	\$140.00	-0.43%
5/31/2013	\$138.70	-0.93%
6/3/2013	\$140.90	1.57%
6/4/2013	\$140.00	-0.21%
6/5/2013	\$138.90	-0.79%
6/6/2013	\$142.90	2.84%
6/7/2013	\$143.90	0.70%
6/10/2013	\$143.90	0.00%
6/11/2013	\$142.80	-0.77%
6/12/2013	\$141.40	-0.99%
6/13/2013	\$142.90	1.06%
6/14/2013	\$142.70	-0.14%
6/17/2013	\$150.40	5.26%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	FXCM Closing Price	Logarithmic Return
6/18/2013	\$155.50	3.33%
6/19/2013	\$153.60	-1.23%
6/20/2013	\$156.20	1.68%
6/21/2013	\$158.30	1.34%
6/24/2013	\$159.80	0.94%
6/25/2013	\$163.40	2.23%
6/26/2013	\$163.40	0.00%
6/27/2013	\$162.40	-0.61%
6/28/2013	\$164.10	1.04%
7/1/2013	\$162.50	-0.98%
7/2/2013	\$161.10	-0.87%
7/3/2013	\$160.70	-0.25%
7/5/2013	\$160.80	0.06%
7/8/2013	\$162.00	0.74%
7/9/2013	\$161.90	-0.06%
7/10/2013	\$161.60	-0.19%
7/11/2013	\$160.80	-0.50%
7/12/2013	\$159.30	-0.94%
7/15/2013	\$160.30	0.63%
7/16/2013	\$166.40	3.73%
7/17/2013	\$167.30	0.54%
7/18/2013	\$171.90	2.71%
7/19/2013	\$170.50	-0.82%
7/22/2013	\$168.90	-0.94%
7/23/2013	\$168.20	-0.42%
7/24/2013	\$169.10	0.53%
7/25/2013	\$167.60	-0.89%
7/26/2013	\$164.00	-2.17%
7/29/2013	\$162.90	-0.67%
7/30/2013	\$162.80	-0.06%
7/31/2013	\$165.00	1.34%
8/1/2013	\$169.10	2.45%
8/2/2013	\$169.40	0.18%
8/5/2013	\$168.10	-0.77%
8/6/2013	\$167.10	-0.60%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	FXCM Closing Price	Logarithmic Return
8/7/2013	\$179.90	7.38%
8/8/2013	\$177.20	-1.51%
8/9/2013	\$179.90	1.51%
8/12/2013	\$182.10	1.22%
8/13/2013	\$189.50	3.98%
8/14/2013	\$191.60	1.10%
8/15/2013	\$189.60	-1.05%
8/16/2013	\$185.20	-2.35%
8/19/2013	\$183.70	-0.81%
8/20/2013	\$186.40	1.46%
8/21/2013	\$186.80	0.21%
8/22/2013	\$189.90	1.65%
8/23/2013	\$190.80	0.47%
8/26/2013	\$194.20	1.77%
8/27/2013	\$191.90	-1.19%
8/28/2013	\$191.50	-0.21%
8/29/2013	\$197.60	3.14%
8/30/2013	\$189.90	-3.97%
9/3/2013	\$191.40	0.79%
9/4/2013	\$191.00	0.10%
9/5/2013	\$192.10	0.57%
9/6/2013	\$194.40	1.19%
9/9/2013	\$197.00	1.33%
9/10/2013	\$196.60	-0.20%
9/11/2013	\$190.20	-3.31%
9/12/2013	\$187.00	-1.70%
9/13/2013	\$187.50	0.27%
9/16/2013	\$190.70	1.69%
9/17/2013	\$190.90	0.10%
9/18/2013	\$189.70	-0.63%
9/19/2013	\$189.70	0.00%
9/20/2013	\$192.70	1.57%
9/23/2013	\$196.20	1.80%
9/24/2013	\$193.00	-1.64%
9/25/2013	\$193.00	0.00%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	FXCM Closing Price	Logarithmic Return
9/26/2013	\$190.70	-1.20%
9/27/2013	\$197.60	3.55%
9/30/2013	\$197.50	-0.05%
10/1/2013	\$196.70	-0.41%
10/2/2013	\$191.40	-2.73%
10/3/2013	\$187.90	-1.85%
10/4/2013	\$190.00	1.11%
10/7/2013	\$187.30	-1.43%
10/8/2013	\$178.90	-4.59%
10/9/2013	\$176.80	-1.18%
10/10/2013	\$177.50	0.40%
10/11/2013	\$181.50	2.23%
10/14/2013	\$182.60	0.60%
10/15/2013	\$178.70	-2.16%
10/16/2013	\$180.50	1.00%
10/17/2013	\$174.20	-3.55%
10/18/2013	\$171.00	-1.85%
10/21/2013	\$169.80	-0.70%
10/22/2013	\$167.90	-1.13%
10/23/2013	\$163.00	-2.96%
10/24/2013	\$162.70	-0.18%
10/25/2013	\$166.30	2.19%
10/28/2013	\$165.30	-0.60%
10/29/2013	\$170.50	3.10%
10/30/2013	\$166.00	-2.67%
10/31/2013	\$163.90	-1.27%
11/1/2013	\$163.30	-0.37%
11/4/2013	\$164.60	0.79%
11/5/2013	\$161.20	-2.09%
11/6/2013	\$161.70	0.31%
11/7/2013	\$148.40	-8.58%
11/8/2013	\$154.80	4.22%
11/11/2013	\$155.70	0.58%
11/12/2013	\$157.50	1.15%
11/13/2013	\$162.90	3.37%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM Closing Price	FXCM
		Logarithmic Return
11/14/2013	\$156.90	-3.75%
11/15/2013	\$156.90	0.00%
11/18/2013	\$155.20	-1.09%
11/19/2013	\$157.50	1.47%
11/20/2013	\$158.50	0.63%
11/21/2013	\$161.10	1.63%
11/22/2013	\$161.50	0.25%
11/25/2013	\$165.00	2.14%
11/26/2013	\$168.50	2.10%
11/27/2013	\$166.70	-1.07%
11/29/2013	\$166.60	-0.06%
12/2/2013	\$163.80	-1.69%
12/3/2013	\$161.80	-1.23%
12/4/2013	\$163.10	0.80%
12/5/2013	\$162.90	-0.12%
12/6/2013	\$165.80	1.76%
12/9/2013	\$168.20	1.44%
12/10/2013	\$167.60	-0.36%
12/11/2013	\$165.20	-1.44%
12/12/2013	\$162.80	-1.46%
12/13/2013	\$158.00	-2.99%
12/16/2013	\$159.90	1.20%
12/17/2013	\$160.30	0.62%
12/18/2013	\$159.90	-0.25%
12/19/2013	\$164.00	2.53%
12/20/2013	\$170.30	3.77%
12/23/2013	\$172.10	1.05%
12/24/2013	\$173.10	0.58%
12/26/2013	\$172.20	-0.52%
12/27/2013	\$171.70	-0.29%
12/30/2013	\$170.20	-0.88%
12/31/2013	\$178.40	4.71%
1/2/2014	\$182.90	2.49%
1/3/2014	\$181.10	-0.99%
1/6/2014	\$179.10	-1.11%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	FXCM Closing Price	Logarithmic Return
1/7/2014	\$178.50	-0.34%
1/8/2014	\$179.60	0.61%
1/9/2014	\$179.00	-0.33%
1/10/2014	\$176.90	-1.18%
1/13/2014	\$174.30	-1.48%
1/14/2014	\$170.10	-2.44%
1/15/2014	\$169.80	-0.18%
1/16/2014	\$169.30	-0.29%
1/17/2014	\$167.60	-1.01%
1/21/2014	\$168.00	0.24%
1/22/2014	\$166.80	-0.72%
1/23/2014	\$161.80	-3.04%
1/24/2014	\$165.60	2.32%
1/27/2014	\$163.50	-1.28%
1/28/2014	\$163.50	0.00%
1/29/2014	\$165.20	1.03%
1/30/2014	\$165.60	0.24%
1/31/2014	\$171.40	3.44%
2/3/2014	\$168.60	-1.65%
2/4/2014	\$170.10	0.89%
2/5/2014	\$167.70	-1.42%
2/6/2014	\$168.00	0.18%
2/7/2014	\$174.40	3.74%
2/10/2014	\$179.10	2.66%
2/11/2014	\$174.10	-2.83%
2/12/2014	\$169.40	-2.74%
2/13/2014	\$168.00	-0.83%
2/14/2014	\$165.80	-1.32%
2/18/2014	\$165.00	-0.48%
2/19/2014	\$162.60	-1.47%
2/20/2014	\$167.20	2.79%
2/21/2014	\$168.20	0.60%
2/24/2014	\$168.20	0.00%
2/25/2014	\$169.30	0.65%
2/26/2014	\$167.10	-1.31%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	Closing Price	Logarithmic Return
2/27/2014	\$167.50	0.24%
2/28/2014	\$168.50	0.60%
3/3/2014	\$165.40	-1.86%
3/4/2014	\$167.00	0.96%
3/5/2014	\$164.30	-1.63%
3/6/2014	\$162.30	-1.22%
3/7/2014	\$162.10	-0.12%
3/10/2014	\$157.80	-2.69%
3/11/2014	\$154.20	-2.31%
3/12/2014	\$156.60	1.54%
3/13/2014	\$159.90	2.09%
3/14/2014	\$160.60	0.44%
3/17/2014	\$162.60	1.24%
3/18/2014	\$162.10	-0.31%
3/19/2014	\$163.00	0.92%
3/20/2014	\$165.70	1.64%
3/21/2014	\$161.70	-2.44%
3/24/2014	\$159.50	-1.37%
3/25/2014	\$153.10	-4.10%
3/26/2014	\$149.10	-2.65%
3/27/2014	\$148.70	-0.27%
3/28/2014	\$147.90	-0.54%
3/31/2014	\$147.70	-0.14%
4/1/2014	\$151.70	2.67%
4/2/2014	\$152.60	0.59%
4/3/2014	\$152.80	0.13%
4/4/2014	\$152.30	-0.33%
4/7/2014	\$148.90	-2.26%
4/8/2014	\$149.10	0.13%
4/9/2014	\$150.10	0.67%
4/10/2014	\$146.70	-2.29%
4/11/2014	\$144.30	-1.65%
4/14/2014	\$146.80	1.72%
4/15/2014	\$145.30	-1.03%
4/16/2014	\$147.60	1.57%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	FXCM Closing Price	Logarithmic Return
4/17/2014	\$154.70	4.70%
4/21/2014	\$154.80	0.06%
4/22/2014	\$157.60	1.79%
4/23/2014	\$158.90	0.82%
4/24/2014	\$157.60	-0.82%
4/25/2014	\$154.90	-1.73%
4/28/2014	\$152.10	-1.82%
4/29/2014	\$153.00	0.59%
4/30/2014	\$154.80	1.17%
5/1/2014	\$151.40	-2.22%
5/2/2014	\$152.90	0.99%
5/5/2014	\$150.00	-1.91%
5/6/2014	\$143.00	-4.78%
5/7/2014	\$140.20	-1.98%
5/8/2014	\$131.60	-6.33%
5/9/2014	\$128.50	-2.38%
5/12/2014	\$134.10	4.27%
5/13/2014	\$135.10	0.74%
5/14/2014	\$133.00	-1.57%
5/15/2014	\$132.90	-0.08%
5/16/2014	\$129.10	-2.90%
5/19/2014	\$132.00	2.22%
5/20/2014	\$129.70	-1.76%
5/21/2014	\$129.10	-0.46%
5/22/2014	\$129.10	0.00%
5/23/2014	\$131.20	1.61%
5/27/2014	\$133.80	1.96%
5/28/2014	\$134.40	0.45%
5/29/2014	\$134.40	0.00%
5/30/2014	\$133.80	-0.45%
6/2/2014	\$131.20	-1.96%
6/3/2014	\$130.60	-0.46%
6/4/2014	\$130.60	0.46%
6/5/2014	\$133.50	2.20%
6/6/2014	\$133.90	0.30%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	FXCM Closing Price	Logarithmic Return
6/9/2014	\$137.70	2.80%
6/10/2014	\$145.80	5.72%
6/11/2014	\$144.10	-1.17%
6/12/2014	\$148.10	2.74%
6/13/2014	\$148.60	0.34%
6/16/2014	\$153.50	3.24%
6/17/2014	\$154.20	0.45%
6/18/2014	\$152.40	-1.17%
6/19/2014	\$148.50	-2.59%
6/20/2014	\$146.50	-1.36%
6/23/2014	\$143.30	-2.21%
6/24/2014	\$140.70	-1.83%
6/25/2014	\$144.90	2.94%
6/26/2014	\$148.50	2.45%
6/27/2014	\$148.50	0.00%
6/30/2014	\$149.60	0.74%
7/1/2014	\$145.20	-2.99%
7/2/2014	\$139.90	-3.72%
7/3/2014	\$141.80	1.35%
7/7/2014	\$141.30	-0.35%
7/8/2014	\$141.20	-0.07%
7/9/2014	\$136.00	-3.75%
7/10/2014	\$134.10	-1.41%
7/11/2014	\$132.90	-0.90%
7/14/2014	\$134.20	0.97%
7/15/2014	\$133.40	-0.60%
7/16/2014	\$132.80	-0.45%
7/17/2014	\$131.20	-1.21%
7/18/2014	\$133.40	1.66%
7/21/2014	\$133.90	0.37%
7/22/2014	\$138.00	3.02%
7/23/2014	\$139.50	1.08%
7/24/2014	\$141.60	1.49%
7/25/2014	\$139.70	-1.35%
7/28/2014	\$139.60	-0.07%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM Closing Price	FXCM
		Logarithmic Return
7/29/2014	\$139.40	-0.14%
7/30/2014	\$138.80	-0.43%
7/31/2014	\$136.20	-1.89%
8/1/2014	\$133.70	-1.85%
8/4/2014	\$131.60	-1.58%
8/5/2014	\$131.90	0.23%
8/6/2014	\$132.00	0.08%
8/7/2014	\$130.10	-1.45%
8/8/2014	\$128.40	-1.32%
8/11/2014	\$129.50	0.85%
8/12/2014	\$130.50	0.77%
8/13/2014	\$132.50	1.52%
8/14/2014	\$134.70	1.65%
8/15/2014	\$135.30	0.44%
8/18/2014	\$137.80	1.83%
8/19/2014	\$135.10	-1.98%
8/20/2014	\$134.10	-0.74%
8/21/2014	\$136.20	1.55%
8/22/2014	\$138.40	1.60%
8/25/2014	\$139.00	0.43%
8/26/2014	\$141.20	1.57%
8/27/2014	\$141.00	-0.14%
8/28/2014	\$142.70	1.20%
8/29/2014	\$144.90	1.53%
9/2/2014	\$143.20	-1.18%
9/3/2014	\$140.10	-1.76%
9/4/2014	\$140.00	-0.07%
9/5/2014	\$143.90	2.75%
9/8/2014	\$147.10	2.20%
9/9/2014	\$147.50	0.27%
9/10/2014	\$153.00	3.66%
9/11/2014	\$155.90	1.88%
9/12/2014	\$157.90	1.27%
9/15/2014	\$156.30	-1.02%
9/16/2014	\$157.60	0.83%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	FXCM Closing Price	Logarithmic Return
9/17/2014	\$162.20	2.88%
9/18/2014	\$163.40	0.74%
9/19/2014	\$165.90	1.52%
9/22/2014	\$163.60	-1.40%
9/23/2014	\$162.50	-0.67%
9/24/2014	\$163.60	0.67%
9/25/2014	\$160.40	-1.98%
9/26/2014	\$159.60	-0.50%
9/29/2014	\$159.20	-0.25%
9/30/2014	\$158.50	-0.44%
10/1/2014	\$156.50	-1.27%
10/2/2014	\$162.90	4.01%
10/3/2014	\$162.90	0.00%
10/6/2014	\$161.40	-0.93%
10/7/2014	\$160.80	-0.37%
10/8/2014	\$160.80	0.00%
10/9/2014	\$160.70	-0.06%
10/10/2014	\$160.90	0.12%
10/13/2014	\$160.90	0.00%
10/14/2014	\$161.20	0.19%
10/15/2014	\$165.10	2.39%
10/16/2014	\$168.50	2.04%
10/17/2014	\$168.70	0.12%
10/20/2014	\$163.60	-3.07%
10/21/2014	\$160.30	-2.04%
10/22/2014	\$153.10	-4.60%
10/23/2014	\$149.80	-2.18%
10/24/2014	\$145.30	-3.05%
10/27/2014	\$150.20	3.32%
10/28/2014	\$156.10	3.85%
10/29/2014	\$156.80	0.45%
10/30/2014	\$160.10	2.08%
10/31/2014	\$164.60	2.77%
11/3/2014	\$164.10	-0.30%
11/4/2014	\$164.10	0.00%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	FXCM Closing Price	Logarithmic Return
11/5/2014	\$163.70	-0.24%
11/6/2014	\$166.60	1.76%
11/7/2014	\$158.10	-5.24%
11/10/2014	\$165.80	4.76%
11/11/2014	\$165.60	-0.12%
11/12/2014	\$165.60	0.00%
11/13/2014	\$166.00	0.24%
11/14/2014	\$166.60	0.36%
11/17/2014	\$161.70	-2.99%
11/18/2014	\$164.90	1.96%
11/19/2014	\$161.40	-2.15%
11/20/2014	\$158.40	-1.88%
11/21/2014	\$158.20	-0.13%
11/24/2014	\$161.40	2.00%
11/25/2014	\$162.50	0.68%
11/26/2014	\$162.20	-0.18%
11/28/2014	\$161.00	-0.74%
12/1/2014	\$161.40	0.25%
12/2/2014	\$166.50	3.11%
12/3/2014	\$165.60	-0.54%
12/4/2014	\$166.70	0.66%
12/5/2014	\$167.40	0.42%
12/8/2014	\$165.60	-1.08%
12/9/2014	\$168.80	1.91%
12/10/2014	\$162.10	-4.05%
12/11/2014	\$164.20	1.29%
12/12/2014	\$165.00	0.49%
12/15/2014	\$168.30	1.98%
12/16/2014	\$162.50	-3.51%
12/17/2014	\$169.60	4.63%
12/18/2014	\$170.90	0.76%
12/19/2014	\$169.70	-0.70%
12/22/2014	\$170.00	0.18%
12/23/2014	\$170.00	0.00%
12/24/2014	\$168.80	-0.71%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM Closing Price	FXCM
		Logarithmic Return
12/26/2014	\$168.10	-0.42%
12/29/2014	\$165.10	-1.80%
12/30/2014	\$164.70	-0.24%
12/31/2014	\$165.70	0.61%
1/2/2015	\$165.50	-0.12%
1/5/2015	\$168.80	1.97%
1/6/2015	\$166.50	-1.37%
1/7/2015	\$170.50	2.37%
1/8/2015	\$169.80	-0.41%
1/9/2015	\$170.40	0.35%
1/12/2015	\$166.50	-2.32%
1/13/2015	\$167.00	0.30%
1/14/2015	\$148.70	-11.61%
1/15/2015	\$126.30	-16.33%
1/20/2015	\$16.00	0.00%
1/21/2015	\$23.30	37.59%
1/22/2015	\$31.00	28.55%
1/23/2015	\$23.70	-26.85%
1/26/2015	\$24.40	2.91%
1/27/2015	\$23.80	-2.49%
1/28/2015	\$23.90	0.42%
1/29/2015	\$22.40	-6.48%
1/30/2015	\$22.00	-1.80%
2/2/2015	\$21.20	-3.70%
2/3/2015	\$20.80	-1.90%
2/4/2015	\$22.80	9.18%
2/5/2015	\$23.30	2.17%
2/6/2015	\$23.20	-0.43%
2/9/2015	\$23.00	-0.87%
2/10/2015	\$22.30	-3.09%
2/11/2015	\$22.30	0.00%
2/12/2015	\$22.20	-0.45%
2/13/2015	\$22.10	-0.45%
2/17/2015	\$21.90	-0.91%
2/18/2015	\$21.10	-3.72%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	FXCM Closing Price	Logarithmic Return
2/19/2015	\$19.90	-5.86%
2/20/2015	\$20.40	2.48%
2/23/2015	\$19.80	-2.99%
2/24/2015	\$19.90	0.50%
2/25/2015	\$21.40	7.27%
2/26/2015	\$20.40	-4.79%
2/27/2015	\$21.10	3.37%
3/2/2015	\$21.90	3.72%
3/3/2015	\$21.40	-2.31%
3/4/2015	\$20.90	-2.36%
3/5/2015	\$21.10	0.95%
3/6/2015	\$21.60	2.34%
3/9/2015	\$21.40	-0.93%
3/10/2015	\$20.90	-2.36%
3/11/2015	\$21.20	1.43%
3/12/2015	\$21.50	1.41%
3/13/2015	\$25.80	18.23%
3/16/2015	\$24.60	-4.76%
3/17/2015	\$24.50	-0.41%
3/18/2015	\$22.10	-10.31%
3/19/2015	\$20.60	-7.03%
3/20/2015	\$21.00	1.92%
3/23/2015	\$21.20	0.95%
3/24/2015	\$20.70	-2.39%
3/25/2015	\$21.00	1.44%
3/26/2015	\$21.20	0.95%
3/27/2015	\$21.60	1.87%
3/30/2015	\$21.30	-1.40%
3/31/2015	\$21.30	0.00%
4/1/2015	\$21.30	0.00%
4/2/2015	\$21.50	0.93%
4/6/2015	\$21.50	0.00%
4/7/2015	\$21.90	1.84%
4/8/2015	\$22.30	1.81%
4/9/2015	\$22.20	-0.45%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	FXCM Closing Price	Logarithmic Return
4/10/2015	\$22.30	0.45%
4/13/2015	\$21.90	-1.81%
4/14/2015	\$21.70	-0.92%
4/15/2015	\$21.70	0.00%
4/16/2015	\$22.00	1.37%
4/17/2015	\$21.30	-3.23%
4/20/2015	\$21.20	-0.47%
4/21/2015	\$21.10	-0.47%
4/22/2015	\$21.30	0.94%
4/23/2015	\$21.10	-0.94%
4/24/2015	\$20.80	-1.43%
4/27/2015	\$20.60	-0.97%
4/28/2015	\$20.80	0.97%
4/29/2015	\$20.40	-1.94%
4/30/2015	\$20.10	-1.48%
5/1/2015	\$19.90	-1.00%
5/4/2015	\$20.00	0.50%
5/5/2015	\$19.50	-2.53%
5/6/2015	\$18.90	-3.13%
5/7/2015	\$18.20	-3.77%
5/8/2015	\$21.50	16.66%
5/11/2015	\$19.60	-9.25%
5/12/2015	\$19.00	-3.11%
5/13/2015	\$17.50	-8.22%
5/14/2015	\$15.90	-9.59%
5/15/2015	\$14.50	-9.22%
5/18/2015	\$14.40	-0.69%
5/19/2015	\$13.90	-3.53%
5/20/2015	\$13.60	-2.18%
5/21/2015	\$13.10	-3.75%
5/22/2015	\$12.20	-7.12%
5/26/2015	\$16.30	28.97%
5/27/2015	\$15.10	-7.65%
5/28/2015	\$14.30	-5.44%
5/29/2015	\$14.40	0.70%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	FXCM Closing Price	Logarithmic Return
6/1/2015	\$13.70	-4.98%
6/2/2015	\$13.90	1.45%
6/3/2015	\$14.30	2.84%
6/4/2015	\$14.50	1.39%
6/5/2015	\$15.90	9.22%
6/8/2015	\$16.60	4.31%
6/9/2015	\$15.90	-4.31%
6/10/2015	\$15.90	0.00%
6/11/2015	\$15.70	-1.27%
6/12/2015	\$15.20	-3.24%
6/15/2015	\$15.10	-0.66%
6/16/2015	\$14.90	-1.33%
6/17/2015	\$14.70	-1.35%
6/18/2015	\$15.10	2.68%
6/19/2015	\$16.50	8.87%
6/22/2015	\$15.80	-4.34%
6/23/2015	\$16.00	1.26%
6/24/2015	\$15.90	-0.63%
6/25/2015	\$16.30	2.48%
6/26/2015	\$15.80	-3.12%
6/29/2015	\$15.80	0.00%
6/30/2015	\$14.50	-8.59%
7/1/2015	\$14.60	0.69%
7/2/2015	\$14.50	-0.69%
7/6/2015	\$13.80	-4.95%
7/7/2015	\$13.40	-2.94%
7/8/2015	\$12.50	-6.95%
7/9/2015	\$13.30	6.20%
7/10/2015	\$13.00	-2.28%
7/13/2015	\$13.40	3.03%
7/14/2015	\$13.80	2.94%
7/15/2015	\$13.50	-2.20%
7/16/2015	\$13.00	-3.77%
7/17/2015	\$13.10	0.77%
7/20/2015	\$13.10	0.00%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	FXCM Closing Price	Logarithmic Return
7/21/2015	\$12.90	-1.54%
7/22/2015	\$11.40	-12.36%
7/23/2015	\$10.40	-9.18%
7/24/2015	\$11.40	9.18%
7/27/2015	\$11.10	-2.67%
7/28/2015	\$11.00	-0.90%
7/29/2015	\$11.20	1.80%
7/30/2015	\$11.00	-1.80%
7/31/2015	\$11.00	0.00%
8/3/2015	\$10.80	-1.83%
8/4/2015	\$11.00	1.83%
8/5/2015	\$10.30	-6.58%
8/6/2015	\$10.30	0.00%
8/7/2015	\$9.60	-7.06%
8/10/2015	\$9.80	2.08%
8/11/2015	\$9.50	-3.11%
8/12/2015	\$9.33	-1.79%
8/13/2015	\$9.02	-3.35%
8/14/2015	\$9.29	2.89%
8/17/2015	\$9.21	-0.84%
8/18/2015	\$9.13	-0.85%
8/19/2015	\$8.90	-2.56%
8/20/2015	\$8.31	-6.92%
8/21/2015	\$8.31	0.04%
8/24/2015	\$8.50	2.27%
8/25/2015	\$9.20	7.95%
8/26/2015	\$9.40	2.12%
8/27/2015	\$9.24	-1.75%
8/28/2015	\$10.10	8.92%
8/31/2015	\$10.70	5.77%
9/1/2015	\$10.10	-5.77%
9/2/2015	\$9.79	-3.17%
9/3/2015	\$9.33	-4.82%
9/4/2015	\$8.95	-4.10%
9/8/2015	\$9.39	4.82%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM Closing Price	FXCM
		Logarithmic Return
9/9/2015	\$8.90	-5.38%
9/10/2015	\$9.37	5.09%
9/11/2015	\$8.94	-4.60%
9/14/2015	\$8.55	-4.51%
9/15/2015	\$8.14	-4.98%
9/16/2015	\$8.40	3.21%
9/17/2015	\$8.42	0.25%
9/18/2015	\$9.05	7.20%
9/21/2015	\$8.48	-6.46%
9/22/2015	\$8.30	-2.19%
9/23/2015	\$8.33	0.32%
9/24/2015	\$8.60	3.23%
9/25/2015	\$8.80	2.30%
9/28/2015	\$8.51	-3.39%
9/29/2015	\$8.50	-0.08%
9/30/2015	\$8.70	2.33%
10/1/2015	\$8.01	-8.26%
10/2/2015	\$8.22	2.59%
10/5/2015	\$9.42	13.63%
10/6/2015	\$9.79	3.85%
10/7/2015	\$9.60	-1.96%
10/8/2015	\$9.28	-3.39%
10/9/2015	\$9.72	4.63%
10/12/2015	\$10.07	3.54%
10/13/2015	\$9.42	-6.67%
10/14/2015	\$10.02	6.17%
10/15/2015	\$10.23	2.07%
10/16/2015	\$10.06	-1.68%
10/19/2015	\$9.68	-3.85%
10/20/2015	\$10.14	4.64%
10/21/2015	\$9.91	-2.29%
10/22/2015	\$9.59	-3.28%
10/23/2015	\$9.34	-2.64%
10/26/2015	\$9.31	-0.32%
10/27/2015	\$8.78	-5.86%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	Closing Price	Logarithmic Return
10/28/2015	\$8.72	-0.69%
10/29/2015	\$8.54	-2.09%
10/30/2015	\$8.66	1.40%
11/2/2015	\$8.71	0.58%
11/3/2015	\$8.58	-1.50%
11/4/2015	\$8.75	1.96%
11/5/2015	\$9.03	3.15%
11/6/2015	\$8.95	-0.89%
11/9/2015	\$9.06	1.22%
11/10/2015	\$8.81	-2.80%
11/11/2015	\$8.58	-2.65%
11/12/2015	\$8.46	-1.41%
11/13/2015	\$8.68	2.57%
11/16/2015	\$8.66	-0.23%
11/17/2015	\$8.27	-4.61%
11/18/2015	\$7.56	-8.98%
11/19/2015	\$7.61	0.66%
11/20/2015	\$7.10	-6.94%
11/23/2015	\$6.71	-5.65%
11/24/2015	\$5.86	-13.54%
11/25/2015	\$6.50	10.37%
11/27/2015	\$6.26	-3.76%
11/30/2015	\$6.55	4.53%
12/1/2015	\$6.54	-0.15%
12/2/2015	\$6.40	-2.16%
12/3/2015	\$6.10	-4.80%
12/4/2015	\$6.58	7.57%
12/7/2015	\$6.02	-8.89%
12/8/2015	\$5.84	-3.04%
12/9/2015	\$5.61	-4.02%
12/10/2015	\$5.80	3.33%
12/11/2015	\$5.30	-9.02%
12/14/2015	\$8.08	42.17%
12/15/2015	\$6.76	-17.84%
12/16/2015	\$9.16	30.38%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM Closing Price	FXCM
		Logarithmic Return
12/17/2015	\$8.77	-4.35%
12/18/2015	\$12.43	34.88%
12/21/2015	\$11.84	-4.86%
12/22/2015	\$11.32	-4.49%
12/23/2015	\$10.80	-4.70%
12/24/2015	\$11.15	3.19%
12/28/2015	\$15.74	34.48%
12/29/2015	\$19.80	22.95%
12/30/2015	\$18.48	-6.90%
12/31/2015	\$16.73	-9.95%
1/4/2016	\$15.77	-5.91%
1/5/2016	\$16.76	6.09%
1/6/2016	\$15.92	-5.14%
1/7/2016	\$14.19	-11.50%
1/8/2016	\$13.60	-4.25%
1/11/2016	\$16.55	19.63%
1/12/2016	\$16.93	2.27%
1/13/2016	\$14.15	-17.94%
1/14/2016	\$13.72	-3.09%
1/15/2016	\$12.95	-5.78%
1/19/2016	\$11.22	-14.34%
1/20/2016	\$11.07	-1.35%
1/21/2016	\$11.84	6.72%
1/22/2016	\$11.80	-0.34%
1/25/2016	\$10.89	-8.03%
1/26/2016	\$11.03	1.28%
1/27/2016	\$11.98	8.26%
1/28/2016	\$11.95	-0.25%
1/29/2016	\$11.64	-2.63%
2/1/2016	\$11.50	-1.21%
2/2/2016	\$10.71	-7.12%
2/3/2016	\$10.90	1.76%
2/4/2016	\$11.05	1.37%
2/5/2016	\$10.53	-4.82%
2/8/2016	\$9.99	-5.26%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	Closing Price	Logarithmic Return
2/9/2016	\$10.01	0.20%
2/10/2016	\$9.96	-0.50%
2/11/2016	\$9.85	-1.11%
2/12/2016	\$9.73	-1.23%
2/16/2016	\$10.75	9.97%
2/17/2016	\$12.32	13.63%
2/18/2016	\$11.70	-5.16%
2/19/2016	\$11.79	0.77%
2/22/2016	\$11.67	-1.02%
2/23/2016	\$11.68	0.09%
2/24/2016	\$11.85	1.44%
2/25/2016	\$11.65	-1.70%
2/26/2016	\$12.04	3.29%
2/29/2016	\$12.53	3.99%
3/1/2016	\$13.66	8.63%
3/2/2016	\$14.92	8.82%
3/3/2016	\$16.45	9.76%
3/4/2016	\$15.42	-6.47%
3/7/2016	\$15.63	1.35%
3/8/2016	\$14.88	-4.92%
3/9/2016	\$15.00	0.80%
3/10/2016	\$14.57	-2.91%
3/11/2016	\$11.10	-27.20%
3/14/2016	\$11.05	-0.45%
3/15/2016	\$10.09	-9.09%
3/16/2016	\$10.34	2.45%
3/17/2016	\$10.45	1.06%
3/18/2016	\$11.20	6.93%
3/21/2016	\$10.92	-2.53%
3/22/2016	\$10.91	-0.09%
3/23/2016	\$10.19	-6.83%
3/24/2016	\$10.08	-1.09%
3/28/2016	\$10.33	2.45%
3/29/2016	\$10.75	3.99%
3/30/2016	\$10.95	1.84%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	FXCM Closing Price	Logarithmic Return
3/31/2016	\$10.74	-1.94%
4/1/2016	\$10.81	0.65%
4/4/2016	\$10.53	-2.62%
4/5/2016	\$10.39	-1.34%
4/6/2016	\$10.78	3.68%
4/7/2016	\$10.68	-0.93%
4/8/2016	\$10.79	1.02%
4/11/2016	\$11.11	2.92%
4/12/2016	\$10.95	-1.45%
4/13/2016	\$11.27	2.88%
4/14/2016	\$11.21	-0.53%
4/15/2016	\$11.04	-1.53%
4/18/2016	\$11.28	2.15%
4/19/2016	\$11.72	3.83%
4/20/2016	\$12.28	4.67%
4/21/2016	\$12.54	2.10%
4/22/2016	\$12.59	0.40%
4/25/2016	\$12.21	-3.06%
4/26/2016	\$12.77	4.48%
4/27/2016	\$12.14	-5.06%
4/28/2016	\$12.38	1.96%
4/29/2016	\$11.66	-5.99%
5/2/2016	\$11.35	-2.69%
5/3/2016	\$11.29	-0.53%
5/4/2016	\$10.95	-3.06%
5/5/2016	\$10.90	-0.46%
5/6/2016	\$11.04	1.28%
5/9/2016	\$10.94	-0.91%
5/10/2016	\$11.06	1.09%
5/11/2016	\$11.66	5.28%
5/12/2016	\$11.40	-2.26%
5/13/2016	\$11.50	0.87%
5/16/2016	\$11.12	-3.36%
5/17/2016	\$11.24	1.07%
5/18/2016	\$11.50	2.29%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM Closing Price	FXCM
		Logarithmic Return
5/19/2016	\$11.35	-1.31%
5/20/2016	\$10.99	-3.22%
5/23/2016	\$10.84	-1.37%
5/24/2016	\$10.81	-0.28%
5/25/2016	\$10.86	0.46%
5/26/2016	\$10.13	-6.96%
5/27/2016	\$10.54	3.97%
5/31/2016	\$10.31	-2.21%
6/1/2016	\$10.36	0.48%
6/2/2016	\$10.43	0.67%
6/3/2016	\$10.15	-2.72%
6/6/2016	\$9.91	-2.39%
6/7/2016	\$9.40	-5.28%
6/8/2016	\$9.79	4.07%
6/9/2016	\$8.90	-9.53%
6/10/2016	\$8.20	-8.19%
6/13/2016	\$8.10	-1.23%
6/14/2016	\$8.10	0.00%
6/15/2016	\$8.04	-0.74%
6/16/2016	\$9.30	14.56%
6/17/2016	\$8.64	-7.36%
6/20/2016	\$8.72	0.92%
6/21/2016	\$8.32	-4.70%
6/22/2016	\$8.43	1.31%
6/23/2016	\$8.77	3.95%
6/24/2016	\$8.40	-4.31%
6/27/2016	\$7.76	-7.92%
6/28/2016	\$8.01	3.17%
6/29/2016	\$8.23	2.71%
6/30/2016	\$8.65	4.98%
7/1/2016	\$8.18	-5.59%
7/5/2016	\$8.23	0.61%
7/6/2016	\$8.18	-0.61%
7/7/2016	\$8.23	0.61%
7/8/2016	\$8.79	6.58%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	Closing Price	Logarithmic Return
7/11/2016	\$9.28	5.42%
7/12/2016	\$9.19	-0.97%
7/13/2016	\$9.20	0.11%
7/14/2016	\$8.99	-2.31%
7/15/2016	\$9.03	0.44%
7/18/2016	\$8.96	-0.78%
7/19/2016	\$8.88	-0.90%
7/20/2016	\$8.93	0.56%
7/21/2016	\$9.39	5.02%
7/22/2016	\$9.33	-0.64%
7/25/2016	\$9.33	0.00%
7/26/2016	\$9.66	3.48%
7/27/2016	\$9.92	2.66%
7/28/2016	\$9.37	-5.70%
7/29/2016	\$9.62	2.63%
8/1/2016	\$9.42	-2.10%
8/2/2016	\$9.12	-3.24%
8/3/2016	\$9.48	3.87%
8/4/2016	\$10.12	6.53%
8/5/2016	\$9.90	-2.20%
8/8/2016	\$10.14	2.40%
8/9/2016	\$10.04	-0.99%
8/10/2016	\$9.75	-2.93%
8/11/2016	\$9.97	2.23%
8/12/2016	\$9.99	0.20%
8/15/2016	\$10.06	0.70%
8/16/2016	\$9.83	-2.31%
8/17/2016	\$9.96	1.31%
8/18/2016	\$10.22	2.58%
8/19/2016	\$9.42	-8.15%
8/22/2016	\$9.41	-0.16%
8/23/2016	\$9.37	-0.37%
8/24/2016	\$8.97	-4.36%
8/25/2016	\$9.03	0.67%
8/26/2016	\$9.28	2.73%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	FXCM Closing Price	Logarithmic Return
8/29/2016	\$9.27	-0.11%
8/30/2016	\$9.57	3.18%
8/31/2016	\$9.33	-2.54%
9/1/2016	\$9.25	-0.86%
9/2/2016	\$9.52	2.88%
9/6/2016	\$9.52	0.00%
9/7/2016	\$9.67	1.56%
9/8/2016	\$9.44	-2.41%
9/9/2016	\$9.18	-2.79%
9/12/2016	\$9.18	0.00%
9/13/2016	\$9.25	0.76%
9/14/2016	\$9.12	-1.42%
9/15/2016	\$9.16	0.44%
9/16/2016	\$8.90	-2.88%
9/19/2016	\$8.89	-0.11%
9/20/2016	\$8.94	0.56%
9/21/2016	\$9.09	1.66%
9/22/2016	\$8.98	-1.22%
9/23/2016	\$8.84	-1.57%
9/26/2016	\$8.88	0.45%
9/27/2016	\$8.69	-2.16%
9/28/2016	\$8.68	-0.12%
9/29/2016	\$8.61	-0.81%
9/30/2016	\$8.77	1.84%
10/3/2016	\$7.87	-10.83%
10/4/2016	\$8.18	3.86%
10/5/2016	\$8.40	2.65%
10/6/2016	\$8.31	-1.08%
10/7/2016	\$8.22	-1.09%
10/10/2016	\$8.26	0.49%
10/11/2016	\$8.14	-1.46%
10/12/2016	\$8.25	1.36%
10/13/2016	\$8.05	-2.47%
10/14/2016	\$8.01	-0.50%
10/17/2016	\$7.90	-1.38%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	FXCM Closing Price	Logarithmic Return
10/18/2016	\$7.85	-0.63%
10/19/2016	\$7.85	0.00%
10/20/2016	\$7.85	0.00%
10/21/2016	\$8.00	1.89%
10/24/2016	\$7.90	-1.26%
10/25/2016	\$7.80	-1.27%
10/26/2016	\$7.85	0.64%
10/27/2016	\$7.65	-2.58%
10/28/2016	\$8.05	5.10%
10/31/2016	\$7.80	-3.15%
11/1/2016	\$8.00	2.53%
11/2/2016	\$7.95	-0.63%
11/3/2016	\$8.00	0.63%
11/4/2016	\$8.00	0.00%
11/7/2016	\$7.85	-1.89%
11/8/2016	\$7.75	-1.28%
11/9/2016	\$7.60	-1.95%
11/10/2016	\$7.85	3.24%
11/11/2016	\$7.90	0.63%
11/14/2016	\$7.80	-1.27%
11/15/2016	\$7.95	1.90%
11/16/2016	\$7.75	-2.55%
11/17/2016	\$8.00	3.17%
11/18/2016	\$7.80	-2.53%
11/21/2016	\$7.80	0.00%
11/22/2016	\$7.95	1.90%
11/23/2016	\$7.80	-1.90%
11/25/2016	\$7.75	-0.64%
11/28/2016	\$7.65	-1.30%
11/29/2016	\$7.65	0.00%
11/30/2016	\$7.70	0.65%
12/1/2016	\$7.60	-1.31%
12/2/2016	\$7.70	1.31%
12/5/2016	\$8.75	12.78%
12/6/2016	\$8.70	-0.57%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	Closing Price	Logarithmic Return
12/7/2016	\$8.95	2.83%
12/8/2016	\$9.20	2.75%
12/9/2016	\$9.10	-1.09%
12/12/2016	\$8.85	-2.79%
12/13/2016	\$8.60	-2.87%
12/14/2016	\$8.15	-5.37%
12/15/2016	\$8.70	6.53%
12/16/2016	\$8.75	0.57%
12/19/2016	\$8.45	-3.49%
12/20/2016	\$8.30	-1.79%
12/21/2016	\$7.85	-5.57%
12/22/2016	\$7.40	-5.90%
12/23/2016	\$7.35	-0.68%
12/27/2016	\$7.35	0.00%
12/28/2016	\$7.20	-2.06%
12/29/2016	\$7.15	-0.70%
12/30/2016	\$7.05	-1.41%
1/3/2017	\$7.18	1.76%
1/4/2017	\$7.60	5.75%
1/5/2017	\$7.95	4.50%
1/6/2017	\$7.90	-0.63%
1/9/2017	\$7.45	-5.86%
1/10/2017	\$7.25	-2.72%
1/11/2017	\$7.30	0.69%
1/12/2017	\$7.35	0.68%
1/13/2017	\$7.40	0.68%
1/17/2017	\$7.30	-1.36%
1/18/2017	\$7.50	2.70%
1/19/2017	\$7.60	1.32%
1/20/2017	\$7.85	3.24%
1/23/2017	\$7.35	-6.58%
1/24/2017	\$7.35	0.00%
1/25/2017	\$7.35	0.00%
1/26/2017	\$7.25	-1.37%
1/27/2017	\$7.00	-3.51%

Exhibit-3**FXCM Inc. Common Stock
Prices and Returns**

March 15, 2012 through February 7, 2017

Date	FXCM	
	FXCM Closing Price	Logarithmic Return
1/30/2017	\$7.00	0.00%
1/31/2017	\$7.00	0.00%
2/1/2017	\$7.16	2.19%
2/2/2017	\$7.15	-0.07%
2/3/2017	\$7.00	-2.12%
2/6/2017	\$6.85	-2.17%
2/7/2017	\$3.45	-68.59%

Source: CRSP.

All prices are adjusted for the 10 for 1 stock split.

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
3/15/2012	0.65%	3.44%
3/16/2012	0.13%	-0.35%
3/19/2012	0.40%	0.06%
3/20/2012	-0.45%	0.39%
3/21/2012	-0.11%	0.03%
3/22/2012	-0.81%	-2.15%
3/23/2012	0.45%	0.48%
3/26/2012	1.39%	1.79%
3/27/2012	-0.37%	-1.60%
3/28/2012	-0.55%	-1.91%
3/29/2012	-0.19%	-1.28%
3/30/2012	0.33%	0.65%
4/2/2012	0.80%	1.17%
4/3/2012	-0.45%	0.69%
4/4/2012	-1.19%	-2.03%
4/5/2012	-0.08%	-0.72%
4/9/2012	-1.14%	-1.51%
4/10/2012	-1.82%	-2.46%
4/11/2012	0.85%	1.36%
4/12/2012	1.50%	2.19%
4/13/2012	-1.25%	-2.63%
4/16/2012	-0.06%	-0.56%
4/17/2012	1.48%	1.35%
4/18/2012	-0.40%	-0.73%
4/19/2012	-0.47%	-0.06%
4/20/2012	0.16%	0.50%
4/23/2012	-0.96%	-1.19%
4/24/2012	0.32%	0.44%
4/25/2012	1.37%	1.53%
4/26/2012	0.68%	1.14%
4/27/2012	0.39%	0.27%
4/30/2012	-0.43%	-0.23%
5/1/2012	0.49%	-0.50%
5/2/2012	-0.20%	-2.07%
5/3/2012	-1.00%	-0.25%
5/4/2012	-1.58%	-1.33%
5/7/2012	0.06%	-0.21%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
5/8/2012	-0.54%	-1.00%
5/9/2012	-0.60%	-0.92%
5/10/2012	0.29%	-0.54%
5/11/2012	-0.28%	0.83%
5/14/2012	-1.22%	-2.06%
5/15/2012	-0.60%	-0.42%
5/16/2012	-0.49%	-0.70%
5/17/2012	-1.60%	-1.27%
5/18/2012	-0.82%	-1.23%
5/21/2012	1.76%	2.06%
5/22/2012	-0.05%	0.51%
5/23/2012	0.28%	-0.62%
5/24/2012	0.10%	0.01%
5/25/2012	-0.15%	1.03%
5/29/2012	1.12%	1.46%
5/30/2012	-1.56%	-3.10%
5/31/2012	-0.20%	-0.12%
6/1/2012	-2.48%	-3.28%
6/4/2012	-0.10%	-1.37%
6/5/2012	0.78%	2.05%
6/6/2012	2.24%	2.18%
6/7/2012	-0.14%	-1.10%
6/8/2012	0.71%	0.22%
6/11/2012	-1.40%	-1.28%
6/12/2012	1.16%	-0.91%
6/13/2012	-0.70%	-0.96%
6/14/2012	0.94%	1.33%
6/15/2012	1.01%	1.56%
6/18/2012	0.22%	-0.33%
6/19/2012	1.15%	1.08%
6/20/2012	-0.15%	0.20%
6/21/2012	-2.37%	-3.38%
6/22/2012	0.72%	0.81%
6/25/2012	-1.55%	-2.59%
6/26/2012	0.48%	0.73%
6/27/2012	0.90%	1.11%
6/28/2012	-0.21%	0.65%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
6/29/2012	2.53%	2.93%
7/2/2012	0.39%	0.21%
7/3/2012	0.89%	0.57%
7/5/2012	-0.41%	-1.02%
7/6/2012	-1.00%	-1.14%
7/9/2012	-0.22%	-1.54%
7/10/2012	-0.88%	-0.81%
7/11/2012	-0.03%	0.80%
7/12/2012	-0.49%	-1.68%
7/13/2012	1.51%	2.44%
7/16/2012	-0.25%	-0.02%
7/17/2012	0.67%	1.02%
7/18/2012	0.62%	-0.00%
7/19/2012	0.28%	-0.31%
7/20/2012	-1.00%	-2.76%
7/23/2012	-1.02%	-1.85%
7/24/2012	-0.95%	-1.10%
7/25/2012	0.07%	1.08%
7/26/2012	1.54%	1.90%
7/27/2012	1.87%	1.97%
7/30/2012	-0.08%	-0.65%
7/31/2012	-0.50%	-0.68%
8/1/2012	-0.45%	-1.03%
8/2/2012	-0.73%	-2.23%
8/3/2012	1.90%	4.22%
8/6/2012	0.35%	0.43%
8/7/2012	0.63%	2.51%
8/8/2012	0.02%	-0.61%
8/9/2012	0.16%	0.92%
8/10/2012	0.19%	-0.99%
8/13/2012	-0.19%	0.50%
8/14/2012	-0.00%	-0.37%
8/15/2012	0.27%	1.10%
8/16/2012	0.79%	1.19%
8/17/2012	0.26%	-0.59%
8/20/2012	-0.06%	-0.21%
8/21/2012	-0.23%	0.33%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
8/22/2012	-0.01%	-0.31%
8/23/2012	-0.74%	-1.14%
8/24/2012	0.55%	1.26%
8/27/2012	-0.06%	-1.20%
8/28/2012	0.02%	0.38%
8/29/2012	0.10%	1.28%
8/30/2012	-0.78%	-0.40%
8/31/2012	0.59%	0.89%
9/4/2012	0.07%	-0.39%
9/5/2012	-0.06%	-0.01%
9/6/2012	1.93%	3.37%
9/7/2012	0.56%	0.67%
9/10/2012	-0.57%	-1.06%
9/11/2012	0.34%	0.79%
9/12/2012	0.26%	0.99%
9/13/2012	1.52%	1.62%
9/14/2012	0.61%	0.53%
9/17/2012	-0.46%	-1.90%
9/18/2012	-0.18%	-1.28%
9/19/2012	0.13%	-1.65%
9/20/2012	-0.19%	-1.41%
9/21/2012	0.04%	0.66%
9/24/2012	-0.31%	-0.31%
9/25/2012	-1.09%	-3.42%
9/26/2012	-0.55%	-0.26%
9/27/2012	1.00%	0.09%
9/28/2012	-0.45%	-0.67%
10/1/2012	0.28%	0.61%
10/2/2012	0.12%	-3.05%
10/3/2012	0.25%	0.46%
10/4/2012	0.76%	1.31%
10/5/2012	-0.01%	0.27%
10/8/2012	-0.36%	-0.65%
10/9/2012	-0.98%	-1.07%
10/10/2012	-0.56%	0.13%
10/11/2012	0.17%	1.17%
10/12/2012	-0.35%	-1.85%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
10/15/2012	0.72%	0.27%
10/16/2012	0.99%	2.35%
10/17/2012	0.51%	1.96%
10/18/2012	-0.27%	-0.62%
10/19/2012	-1.58%	-2.72%
10/22/2012	0.02%	0.17%
10/23/2012	-1.30%	-0.81%
10/24/2012	-0.26%	0.02%
10/25/2012	0.33%	1.16%
10/26/2012	-0.14%	0.03%
10/31/2012	0.25%	-0.01%
11/1/2012	1.11%	1.31%
11/2/2012	-0.98%	-0.36%
11/5/2012	0.22%	1.41%
11/6/2012	0.78%	-0.18%
11/7/2012	-2.13%	-3.21%
11/8/2012	-1.16%	-0.85%
11/9/2012	0.09%	-0.66%
11/12/2012	-0.02%	-0.44%
11/13/2012	-0.42%	-1.37%
11/14/2012	-1.48%	-1.46%
11/15/2012	-0.29%	1.51%
11/16/2012	0.62%	-0.02%
11/19/2012	1.90%	1.17%
11/20/2012	0.10%	0.30%
11/21/2012	0.31%	0.77%
11/23/2012	1.26%	1.08%
11/26/2012	-0.16%	0.23%
11/27/2012	-0.44%	-0.60%
11/28/2012	0.75%	1.41%
11/29/2012	0.54%	-0.01%
11/30/2012	0.03%	0.21%
12/3/2012	-0.42%	-0.48%
12/4/2012	-0.13%	-0.45%
12/5/2012	0.18%	0.75%
12/6/2012	0.28%	0.62%
12/7/2012	0.25%	1.45%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
12/10/2012	0.15%	-0.66%
12/11/2012	0.61%	1.68%
12/12/2012	0.03%	-0.50%
12/13/2012	-0.59%	0.35%
12/14/2012	-0.31%	0.14%
12/17/2012	1.01%	1.74%
12/18/2012	1.10%	1.33%
12/19/2012	-0.47%	0.86%
12/20/2012	0.49%	0.16%
12/21/2012	-0.85%	-0.92%
12/24/2012	-0.22%	-0.17%
12/26/2012	-0.50%	-0.63%
12/27/2012	-0.07%	-0.15%
12/28/2012	-0.93%	-0.23%
12/31/2012	1.63%	1.22%
1/2/2013	2.47%	3.86%
1/3/2013	-0.19%	0.08%
1/4/2013	0.56%	2.06%
1/7/2013	-0.26%	-0.58%
1/8/2013	-0.22%	-0.39%
1/9/2013	0.34%	-0.15%
1/10/2013	0.68%	0.98%
1/11/2013	0.02%	0.29%
1/14/2013	-0.03%	-0.52%
1/15/2013	0.20%	0.57%
1/16/2013	-0.07%	-1.07%
1/17/2013	0.59%	0.89%
1/18/2013	0.29%	1.29%
1/22/2013	0.52%	1.90%
1/23/2013	0.03%	-0.72%
1/24/2013	0.06%	0.91%
1/25/2013	0.52%	1.37%
1/28/2013	-0.13%	0.53%
1/29/2013	0.36%	1.35%
1/30/2013	-0.39%	-0.13%
1/31/2013	-0.08%	0.20%
2/1/2013	0.92%	1.30%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
2/4/2013	-1.11%	-1.53%
2/5/2013	0.92%	1.43%
2/6/2013	0.13%	0.67%
2/7/2013	-0.21%	0.75%
2/8/2013	0.54%	-0.41%
2/11/2013	-0.10%	-0.52%
2/12/2013	0.22%	1.05%
2/13/2013	0.14%	0.21%
2/14/2013	0.08%	0.19%
2/15/2013	-0.20%	-0.12%
2/19/2013	0.69%	0.89%
2/20/2013	-1.34%	-1.85%
2/21/2013	-0.71%	-1.96%
2/22/2013	0.86%	1.74%
2/25/2013	-1.73%	-2.08%
2/26/2013	0.56%	-0.54%
2/27/2013	1.22%	1.23%
2/28/2013	-0.06%	-0.80%
3/1/2013	0.18%	0.42%
3/4/2013	0.36%	1.67%
3/5/2013	0.92%	1.28%
3/6/2013	0.17%	1.49%
3/7/2013	0.23%	1.17%
3/8/2013	0.49%	0.78%
3/11/2013	0.27%	0.49%
3/12/2013	-0.19%	-0.03%
3/13/2013	0.08%	1.58%
3/14/2013	0.59%	-0.97%
3/15/2013	-0.15%	-0.69%
3/18/2013	-0.53%	-1.06%
3/19/2013	-0.29%	-0.93%
3/20/2013	0.72%	1.24%
3/21/2013	-0.76%	-1.55%
3/22/2013	0.58%	0.12%
3/25/2013	-0.31%	-0.37%
3/26/2013	0.73%	0.64%
3/27/2013	-0.01%	-0.38%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
3/28/2013	0.40%	0.68%
4/1/2013	-0.54%	-1.83%
4/2/2013	0.27%	0.24%
4/3/2013	-1.19%	-2.74%
4/4/2013	0.38%	-0.08%
4/5/2013	-0.35%	-1.14%
4/8/2013	0.66%	1.31%
4/9/2013	0.37%	0.74%
4/10/2013	1.15%	2.17%
4/11/2013	0.32%	0.73%
4/12/2013	-0.38%	-1.36%
4/15/2013	-2.59%	-3.38%
4/16/2013	1.46%	1.30%
4/17/2013	-1.48%	-2.13%
4/18/2013	-0.57%	-0.52%
4/19/2013	0.93%	0.68%
4/22/2013	0.43%	-0.03%
4/23/2013	1.01%	1.12%
4/24/2013	0.22%	0.55%
4/25/2013	0.49%	0.52%
4/26/2013	-0.25%	-0.26%
4/29/2013	0.73%	1.02%
4/30/2013	0.41%	0.74%
5/1/2013	-1.07%	-3.52%
5/2/2013	0.94%	1.75%
5/3/2013	1.03%	4.49%
5/6/2013	0.26%	0.41%
5/7/2013	0.51%	-0.34%
5/8/2013	0.50%	0.45%
5/9/2013	-0.37%	0.31%
5/10/2013	0.47%	2.73%
5/13/2013	-0.06%	0.45%
5/14/2013	0.93%	2.77%
5/15/2013	0.39%	0.08%
5/16/2013	-0.46%	-0.24%
5/17/2013	0.94%	1.73%
5/20/2013	0.06%	-0.51%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
5/21/2013	0.16%	-0.22%
5/22/2013	-0.97%	-0.63%
5/23/2013	-0.24%	0.14%
5/24/2013	-0.10%	0.43%
5/28/2013	0.63%	3.21%
5/29/2013	-0.70%	0.38%
5/30/2013	0.42%	1.03%
5/31/2013	-1.37%	-1.52%
6/3/2013	0.46%	-0.72%
6/4/2013	-0.56%	-0.46%
6/5/2013	-1.35%	-2.44%
6/6/2013	0.89%	2.48%
6/7/2013	1.13%	2.73%
6/10/2013	0.02%	0.27%
6/11/2013	-1.09%	-1.84%
6/12/2013	-0.82%	-0.62%
6/13/2013	1.49%	1.73%
6/14/2013	-0.54%	-1.44%
6/17/2013	0.72%	2.63%
6/18/2013	0.73%	0.25%
6/19/2013	-1.35%	-0.28%
6/20/2013	-2.61%	-0.49%
6/21/2013	0.14%	0.29%
6/24/2013	-1.24%	-0.36%
6/25/2013	1.03%	1.34%
6/26/2013	0.89%	0.28%
6/27/2013	0.81%	0.79%
6/28/2013	-0.28%	0.56%
7/1/2013	0.67%	1.11%
7/2/2013	-0.14%	-0.31%
7/3/2013	0.04%	0.55%
7/5/2013	0.90%	2.34%
7/8/2013	0.52%	1.19%
7/9/2013	0.77%	0.52%
7/10/2013	0.06%	-0.84%
7/11/2013	1.45%	-1.49%
7/12/2013	0.25%	0.93%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
7/15/2013	0.23%	0.35%
7/16/2013	-0.38%	-2.27%
7/17/2013	0.30%	-0.27%
7/18/2013	0.54%	1.87%
7/19/2013	0.15%	0.81%
7/22/2013	0.28%	0.82%
7/23/2013	-0.12%	2.06%
7/24/2013	-0.49%	-1.33%
7/25/2013	0.40%	1.47%
7/26/2013	0.01%	-0.66%
7/29/2013	-0.38%	-0.71%
7/30/2013	0.04%	0.80%
7/31/2013	0.02%	-0.12%
8/1/2013	1.22%	2.50%
8/2/2013	0.13%	0.03%
8/5/2013	-0.07%	0.10%
8/6/2013	-0.66%	-0.97%
8/7/2013	-0.45%	0.17%
8/8/2013	0.54%	-0.28%
8/9/2013	-0.19%	0.18%
8/12/2013	-0.01%	-2.15%
8/13/2013	0.15%	2.23%
8/14/2013	-0.41%	-1.19%
8/15/2013	-1.30%	-2.31%
8/16/2013	-0.29%	0.80%
8/19/2013	-0.71%	-0.39%
8/20/2013	0.57%	1.15%
8/21/2013	-0.62%	-0.92%
8/22/2013	0.91%	0.34%
8/23/2013	0.44%	0.30%
8/26/2013	-0.28%	0.14%
8/27/2013	-1.64%	-4.04%
8/28/2013	0.26%	0.82%
8/29/2013	0.32%	1.18%
8/30/2013	-0.48%	-1.67%
9/3/2013	0.45%	1.10%
9/4/2013	0.76%	3.07%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
9/5/2013	0.18%	0.49%
9/6/2013	0.11%	-0.39%
9/9/2013	1.08%	1.32%
9/10/2013	0.72%	2.54%
9/11/2013	0.27%	-0.44%
9/12/2013	-0.40%	-0.31%
9/13/2013	0.27%	-0.09%
9/16/2013	0.51%	0.24%
9/17/2013	0.50%	1.71%
9/18/2013	1.25%	-3.88%
9/19/2013	-0.11%	-1.20%
9/20/2013	-0.73%	0.44%
9/23/2013	-0.42%	-1.40%
9/24/2013	-0.12%	0.95%
9/25/2013	-0.17%	0.38%
9/26/2013	0.40%	0.33%
9/27/2013	-0.36%	-0.61%
9/30/2013	-0.49%	-0.42%
10/1/2013	0.87%	1.21%
10/2/2013	-0.07%	-0.64%
10/3/2013	-0.87%	-0.42%
10/4/2013	0.67%	1.62%
10/7/2013	-0.85%	-1.96%
10/8/2013	-1.32%	-2.30%
10/9/2013	-0.05%	0.42%
10/10/2013	2.08%	2.76%
10/11/2013	0.69%	1.30%
10/14/2013	0.41%	0.69%
10/15/2013	-0.69%	2.30%
10/16/2013	1.27%	1.55%
10/17/2013	0.77%	0.71%
10/18/2013	0.69%	1.05%
10/21/2013	0.01%	-0.77%
10/22/2013	0.55%	-0.37%
10/23/2013	-0.53%	-0.44%
10/24/2013	0.40%	-0.19%
10/25/2013	0.31%	0.76%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
10/28/2013	0.03%	-1.19%
10/29/2013	0.44%	0.14%
10/30/2013	-0.57%	-1.11%
10/31/2013	-0.35%	-0.69%
11/1/2013	0.14%	1.53%
11/4/2013	0.43%	0.60%
11/5/2013	-0.30%	-0.01%
11/6/2013	0.30%	0.30%
11/7/2013	-1.40%	-1.73%
11/8/2013	1.23%	4.19%
11/11/2013	0.10%	0.75%
11/12/2013	-0.22%	-0.67%
11/13/2013	0.85%	1.06%
11/14/2013	0.46%	0.44%
11/15/2013	0.44%	0.45%
11/18/2013	-0.46%	-0.18%
11/19/2013	-0.34%	0.23%
11/20/2013	-0.33%	0.01%
11/21/2013	0.86%	1.66%
11/22/2013	0.46%	0.20%
11/25/2013	-0.14%	-0.56%
11/26/2013	0.11%	0.05%
11/27/2013	0.27%	0.18%
11/29/2013	0.02%	-0.85%
12/2/2013	-0.37%	0.94%
12/3/2013	-0.37%	-0.62%
12/4/2013	-0.10%	-0.12%
12/5/2013	-0.35%	-0.54%
12/6/2013	0.96%	1.26%
12/9/2013	0.19%	0.62%
12/10/2013	-0.28%	-0.30%
12/11/2013	-1.21%	-0.36%
12/12/2013	-0.26%	0.14%
12/13/2013	0.13%	0.23%
12/16/2013	0.64%	0.84%
12/17/2013	-0.23%	-1.57%
12/18/2013	1.44%	2.80%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
12/19/2013	-0.10%	-0.11%
12/20/2013	0.69%	0.20%
12/23/2013	0.62%	0.39%
12/24/2013	0.35%	0.07%
12/26/2013	0.40%	-0.17%
12/27/2013	-0.01%	-0.14%
12/30/2013	0.03%	-0.14%
12/31/2013	0.42%	1.26%
1/2/2014	-0.88%	-0.51%
1/3/2014	0.05%	0.66%
1/6/2014	-0.34%	-0.49%
1/7/2014	0.61%	-0.13%
1/8/2014	0.02%	0.60%
1/9/2014	0.01%	0.28%
1/10/2014	0.36%	-0.41%
1/13/2014	-1.17%	-2.18%
1/14/2014	1.02%	2.36%
1/15/2014	0.51%	1.31%
1/16/2014	-0.03%	1.97%
1/17/2014	-0.35%	-0.24%
1/21/2014	0.33%	1.52%
1/22/2014	0.15%	0.18%
1/23/2014	-0.82%	-1.81%
1/24/2014	-2.13%	-3.24%
1/27/2014	-0.67%	-2.01%
1/28/2014	0.73%	1.07%
1/29/2014	-1.00%	-1.99%
1/30/2014	1.14%	2.14%
1/31/2014	-0.58%	-1.29%
2/3/2014	-2.34%	-4.32%
2/4/2014	0.76%	1.81%
2/5/2014	-0.19%	-0.53%
2/6/2014	1.18%	1.62%
2/7/2014	1.25%	0.89%
2/10/2014	0.16%	0.77%
2/11/2014	1.05%	2.25%
2/12/2014	0.12%	0.68%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
2/13/2014	0.69%	1.19%
2/14/2014	0.41%	-1.12%
2/18/2014	0.32%	2.32%
2/19/2014	-0.69%	-1.51%
2/20/2014	0.64%	1.77%
2/21/2014	-0.08%	0.14%
2/24/2014	0.62%	0.94%
2/25/2014	-0.13%	-1.21%
2/26/2014	0.10%	-0.06%
2/27/2014	0.49%	0.28%
2/28/2014	0.17%	0.60%
3/3/2014	-0.66%	-1.90%
3/4/2014	1.53%	3.76%
3/5/2014	0.04%	0.02%
3/6/2014	0.17%	0.57%
3/7/2014	-0.08%	0.02%
3/10/2014	-0.13%	0.22%
3/11/2014	-0.55%	-0.75%
3/12/2014	0.13%	-0.22%
3/13/2014	-1.12%	-1.54%
3/14/2014	-0.14%	-0.53%
3/17/2014	0.82%	1.49%
3/18/2014	0.76%	1.29%
3/19/2014	-0.68%	1.65%
3/20/2014	0.47%	2.22%
3/21/2014	-0.29%	-0.05%
3/24/2014	-0.61%	-0.68%
3/25/2014	0.34%	-1.38%
3/26/2014	-0.82%	-0.97%
3/27/2014	-0.11%	-2.16%
3/28/2014	0.45%	-0.04%
3/31/2014	0.91%	1.18%
4/1/2014	0.82%	0.93%
4/2/2014	0.28%	0.58%
4/3/2014	-0.31%	-2.96%
4/4/2014	-1.27%	-4.55%
4/7/2014	-1.17%	-1.52%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
4/8/2014	0.54%	0.39%
4/9/2014	1.12%	2.39%
4/10/2014	-2.10%	-3.77%
4/11/2014	-0.98%	-1.17%
4/14/2014	0.65%	1.35%
4/15/2014	0.52%	1.89%
4/16/2014	1.06%	2.65%
4/17/2014	0.23%	0.86%
4/21/2014	0.35%	0.37%
4/22/2014	0.55%	1.61%
4/23/2014	-0.28%	-1.04%
4/24/2014	0.07%	0.43%
4/25/2014	-0.95%	-0.73%
4/28/2014	0.11%	-1.68%
4/29/2014	0.56%	0.64%
4/30/2014	0.34%	0.13%
5/1/2014	0.08%	0.12%
5/2/2014	-0.03%	0.26%
5/5/2014	0.13%	-0.40%
5/6/2014	-0.88%	-2.40%
5/7/2014	0.44%	1.13%
5/8/2014	-0.27%	-1.17%
5/9/2014	0.16%	0.82%
5/12/2014	1.11%	2.51%
5/13/2014	-0.07%	-1.75%
5/14/2014	-0.47%	-1.44%
5/15/2014	-0.84%	-3.59%
5/16/2014	0.34%	0.18%
5/19/2014	0.43%	0.56%
5/20/2014	-0.70%	-1.15%
5/21/2014	0.74%	1.56%
5/22/2014	0.35%	1.07%
5/23/2014	0.48%	0.14%
5/27/2014	0.59%	-0.12%
5/28/2014	-0.13%	-0.80%
5/29/2014	0.49%	0.95%
5/30/2014	0.06%	-0.71%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
6/2/2014	0.07%	0.46%
6/3/2014	-0.04%	-1.03%
6/4/2014	0.25%	0.48%
6/5/2014	0.72%	1.11%
6/6/2014	0.51%	1.34%
6/9/2014	0.19%	1.49%
6/10/2014	-0.04%	-1.09%
6/11/2014	-0.31%	-0.80%
6/12/2014	-0.57%	-0.98%
6/13/2014	0.31%	0.99%
6/16/2014	0.14%	-0.12%
6/17/2014	0.29%	4.76%
6/18/2014	0.69%	-0.76%
6/19/2014	0.17%	-0.47%
6/20/2014	0.21%	0.85%
6/23/2014	0.01%	-0.34%
6/24/2014	-0.70%	-1.54%
6/25/2014	0.51%	0.92%
6/26/2014	-0.06%	-0.38%
6/27/2014	0.29%	0.89%
6/30/2014	0.10%	-0.17%
7/1/2014	0.68%	1.29%
7/2/2014	-0.03%	0.08%
7/3/2014	0.49%	2.47%
7/7/2014	-0.61%	-0.74%
7/8/2014	-0.74%	-2.32%
7/9/2014	0.45%	-0.56%
7/10/2014	-0.49%	-0.65%
7/11/2014	0.08%	0.68%
7/14/2014	0.45%	0.88%
7/15/2014	-0.33%	-0.44%
7/16/2014	0.38%	0.07%
7/17/2014	-1.10%	-1.49%
7/18/2014	1.02%	2.37%
7/21/2014	-0.22%	-0.20%
7/22/2014	0.51%	-0.57%
7/23/2014	0.19%	0.27%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
7/24/2014	0.02%	0.56%
7/25/2014	-0.50%	-0.89%
7/28/2014	-0.05%	0.93%
7/29/2014	-0.37%	0.51%
7/30/2014	0.05%	2.00%
7/31/2014	-1.95%	-2.27%
8/1/2014	-0.35%	-1.04%
8/4/2014	0.71%	0.89%
8/5/2014	-0.89%	-0.81%
8/6/2014	0.03%	0.53%
8/7/2014	-0.49%	-1.35%
8/8/2014	1.02%	1.74%
8/11/2014	0.48%	0.65%
8/12/2014	-0.22%	-0.50%
8/13/2014	0.66%	0.03%
8/14/2014	0.42%	0.13%
8/15/2014	0.03%	-0.71%
8/18/2014	0.85%	1.50%
8/19/2014	0.47%	-0.13%
8/20/2014	0.20%	1.27%
8/21/2014	0.25%	0.50%
8/22/2014	-0.14%	0.39%
8/25/2014	0.45%	1.17%
8/26/2014	0.22%	0.00%
8/27/2014	0.06%	-1.12%
8/28/2014	-0.18%	-0.50%
8/29/2014	0.38%	0.47%
9/2/2014	0.00%	0.46%
9/3/2014	-0.06%	-1.33%
9/4/2014	-0.24%	0.38%
9/5/2014	0.44%	0.33%
9/8/2014	-0.28%	0.52%
9/9/2014	-0.63%	-0.47%
9/10/2014	0.33%	1.70%
9/11/2014	0.13%	-0.13%
9/12/2014	-0.66%	1.10%
9/15/2014	-0.29%	-0.71%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
9/16/2014	0.70%	0.45%
9/17/2014	0.08%	1.65%
9/18/2014	0.45%	1.86%
9/19/2014	-0.24%	-1.20%
9/22/2014	-1.01%	-0.72%
9/23/2014	-0.60%	-0.93%
9/24/2014	0.71%	0.31%
9/25/2014	-1.57%	-1.52%
9/26/2014	0.84%	1.07%
9/29/2014	-0.24%	-0.60%
9/30/2014	-0.41%	-0.63%
10/1/2014	-1.30%	-1.64%
10/2/2014	0.08%	0.94%
10/3/2014	0.91%	1.57%
10/6/2014	-0.16%	-0.06%
10/7/2014	-1.51%	-3.31%
10/8/2014	1.58%	0.46%
10/9/2014	-2.14%	-4.27%
10/10/2014	-1.34%	-3.04%
10/13/2014	-1.56%	-2.95%
10/14/2014	0.23%	0.21%
10/15/2014	-0.45%	-0.30%
10/16/2014	0.38%	0.98%
10/17/2014	1.07%	1.22%
10/20/2014	0.92%	0.17%
10/21/2014	1.90%	2.57%
10/22/2014	-0.89%	-1.05%
10/23/2014	1.22%	1.69%
10/24/2014	0.60%	0.54%
10/27/2014	-0.22%	-0.44%
10/28/2014	1.36%	2.36%
10/29/2014	-0.22%	1.61%
10/30/2014	0.50%	0.23%
10/31/2014	1.15%	2.52%
11/3/2014	-0.07%	-0.13%
11/4/2014	-0.46%	0.46%
11/5/2014	0.49%	1.05%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
11/6/2014	0.38%	0.87%
11/7/2014	0.20%	-1.16%
11/10/2014	0.27%	1.31%
11/11/2014	0.11%	0.21%
11/12/2014	0.06%	-0.41%
11/13/2014	-0.09%	-0.03%
11/14/2014	0.13%	0.10%
11/17/2014	-0.02%	-0.75%
11/18/2014	0.55%	0.28%
11/19/2014	-0.24%	-0.28%
11/20/2014	0.33%	-0.43%
11/21/2014	0.53%	-0.09%
11/24/2014	0.32%	0.58%
11/25/2014	-0.04%	-0.22%
11/26/2014	0.28%	-0.16%
11/28/2014	-0.61%	0.06%
12/1/2014	-0.90%	-1.94%
12/2/2014	0.59%	1.81%
12/3/2014	0.52%	2.02%
12/4/2014	-0.21%	0.02%
12/5/2014	0.15%	2.55%
12/8/2014	-0.95%	0.14%
12/9/2014	0.17%	0.37%
12/10/2014	-1.76%	-2.07%
12/11/2014	0.41%	0.55%
12/12/2014	-1.53%	-3.13%
12/15/2014	-0.77%	-0.29%
12/16/2014	-0.59%	-1.49%
12/17/2014	2.15%	3.28%
12/18/2014	2.13%	2.36%
12/19/2014	0.46%	0.01%
12/22/2014	0.33%	0.51%
12/23/2014	0.22%	1.40%
12/24/2014	0.06%	0.07%
12/26/2014	0.37%	-0.37%
12/29/2014	0.12%	-0.03%
12/30/2014	-0.43%	-0.50%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
12/31/2014	-0.88%	-0.48%
1/2/2015	-0.02%	-0.19%
1/5/2015	-1.84%	-2.77%
1/6/2015	-0.97%	-2.58%
1/7/2015	1.11%	1.61%
1/8/2015	1.67%	2.35%
1/9/2015	-0.76%	-2.30%
1/12/2015	-0.78%	-0.80%
1/13/2015	-0.23%	0.70%
1/14/2015	-0.52%	-2.38%
1/15/2015	-0.92%	-2.04%
1/16/2015	1.37%	0.83%
1/20/2015	0.03%	0.64%
1/21/2015	0.45%	-0.14%
1/22/2015	1.46%	2.86%
1/23/2015	-0.42%	-0.26%
1/26/2015	0.44%	0.62%
1/27/2015	-1.01%	-1.64%
1/28/2015	-1.42%	-2.63%
1/29/2015	0.84%	1.36%
1/30/2015	-1.22%	-1.43%
2/2/2015	1.22%	1.86%
2/3/2015	1.49%	3.82%
2/4/2015	-0.44%	0.23%
2/5/2015	1.14%	1.03%
2/6/2015	-0.36%	2.72%
2/9/2015	-0.41%	-0.88%
2/10/2015	0.86%	1.33%
2/11/2015	-0.04%	-0.20%
2/12/2015	1.04%	2.02%
2/13/2015	0.47%	-1.42%
2/17/2015	0.17%	0.97%
2/18/2015	0.02%	-1.19%
2/19/2015	-0.10%	0.73%
2/20/2015	0.57%	0.99%
2/23/2015	-0.06%	-0.39%
2/24/2015	0.23%	1.13%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
2/25/2015	0.07%	-0.31%
2/26/2015	-0.15%	0.08%
2/27/2015	-0.26%	-1.24%
3/2/2015	0.55%	2.27%
3/3/2015	-0.41%	-0.57%
3/4/2015	-0.38%	-0.37%
3/5/2015	0.16%	0.47%
3/6/2015	-1.39%	2.08%
3/9/2015	0.29%	-0.09%
3/10/2015	-1.56%	-1.72%
3/11/2015	-0.02%	1.20%
3/12/2015	1.19%	1.34%
3/13/2015	-0.55%	-1.17%
3/16/2015	1.17%	1.12%
3/17/2015	-0.17%	0.54%
3/18/2015	1.20%	-2.35%
3/19/2015	-0.46%	-1.06%
3/20/2015	0.93%	1.50%
3/23/2015	-0.10%	0.03%
3/24/2015	-0.46%	-0.29%
3/25/2015	-1.48%	-1.65%
3/26/2015	-0.22%	1.34%
3/27/2015	0.25%	0.84%
3/30/2015	1.15%	0.91%
3/31/2015	-0.71%	0.29%
4/1/2015	-0.27%	-1.03%
4/2/2015	0.40%	0.28%
4/6/2015	0.65%	-0.28%
4/7/2015	-0.21%	-0.64%
4/8/2015	0.36%	1.20%
4/9/2015	0.34%	0.83%
4/10/2015	0.46%	-0.04%
4/13/2015	-0.37%	0.23%
4/14/2015	0.19%	-1.07%
4/15/2015	0.62%	0.24%
4/16/2015	-0.04%	0.01%
4/17/2015	-1.14%	-1.07%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
4/20/2015	0.80%	-0.06%
4/21/2015	-0.10%	-0.62%
4/22/2015	0.41%	1.26%
4/23/2015	0.35%	0.24%
4/24/2015	0.12%	-0.63%
4/27/2015	-0.48%	-0.17%
4/28/2015	0.25%	1.38%
4/29/2015	-0.39%	0.98%
4/30/2015	-1.08%	-1.39%
5/1/2015	0.92%	0.64%
5/4/2015	0.30%	1.44%
5/5/2015	-1.16%	-0.45%
5/6/2015	-0.34%	-0.71%
5/7/2015	0.34%	0.51%
5/8/2015	1.20%	0.33%
5/11/2015	-0.40%	1.81%
5/12/2015	-0.22%	-0.86%
5/13/2015	0.02%	0.11%
5/14/2015	0.97%	0.54%
5/15/2015	0.11%	-1.30%
5/18/2015	0.33%	2.01%
5/19/2015	-0.14%	-0.11%
5/20/2015	-0.03%	-0.50%
5/21/2015	0.25%	-0.37%
5/22/2015	-0.22%	-0.18%
5/26/2015	-1.05%	-0.32%
5/27/2015	0.86%	1.25%
5/28/2015	-0.12%	0.14%
5/29/2015	-0.58%	-0.93%
6/1/2015	0.15%	-0.37%
6/2/2015	0.04%	0.93%
6/3/2015	0.26%	1.56%
6/4/2015	-0.89%	-0.46%
6/5/2015	-0.00%	1.91%
6/8/2015	-0.66%	-0.65%
6/9/2015	-0.00%	0.09%
6/10/2015	1.15%	0.95%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
6/11/2015	0.19%	0.04%
6/12/2015	-0.62%	-0.27%
6/15/2015	-0.41%	-0.64%
6/16/2015	0.49%	0.41%
6/17/2015	0.17%	-0.49%
6/18/2015	0.92%	-0.27%
6/19/2015	-0.49%	-0.96%
6/22/2015	0.58%	1.78%
6/23/2015	0.13%	0.64%
6/24/2015	-0.74%	-1.12%
6/25/2015	-0.27%	0.38%
6/26/2015	-0.08%	0.65%
6/29/2015	-2.17%	-3.72%
6/30/2015	0.30%	0.93%
7/1/2015	0.55%	1.42%
7/2/2015	-0.06%	-0.58%
7/6/2015	-0.45%	-0.78%
7/7/2015	0.50%	-0.54%
7/8/2015	-1.66%	-2.49%
7/9/2015	0.27%	1.58%
7/10/2015	1.26%	1.82%
7/13/2015	1.02%	1.33%
7/14/2015	0.47%	0.65%
7/15/2015	-0.25%	-0.01%
7/16/2015	0.69%	2.53%
7/17/2015	-0.06%	-0.02%
7/20/2015	-0.12%	0.25%
7/21/2015	-0.41%	-0.59%
7/22/2015	-0.24%	0.21%
7/23/2015	-0.55%	-0.80%
7/24/2015	-1.01%	-0.72%
7/27/2015	-0.71%	-2.17%
7/28/2015	1.22%	1.04%
7/29/2015	0.75%	1.29%
7/30/2015	0.08%	0.68%
7/31/2015	-0.08%	-0.70%
8/3/2015	-0.37%	-0.25%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
8/4/2015	-0.17%	1.38%
8/5/2015	0.26%	0.56%
8/6/2015	-0.79%	-0.63%
8/7/2015	-0.33%	-0.39%
8/10/2015	1.30%	1.35%
8/11/2015	-0.93%	-2.07%
8/12/2015	0.07%	-2.12%
8/13/2015	-0.21%	0.28%
8/14/2015	0.38%	0.88%
8/17/2015	0.57%	-0.35%
8/18/2015	-0.35%	-0.64%
8/19/2015	-0.88%	-2.10%
8/20/2015	-2.19%	-2.89%
8/21/2015	-2.84%	-3.54%
8/24/2015	-3.93%	-4.89%
8/25/2015	-1.03%	-1.50%
8/26/2015	3.32%	3.70%
8/27/2015	2.41%	2.69%
8/28/2015	0.25%	0.71%
8/31/2015	-0.73%	-1.00%
9/1/2015	-2.86%	-4.01%
9/2/2015	1.62%	1.20%
9/3/2015	0.18%	0.81%
9/4/2015	-1.38%	-1.64%
9/8/2015	2.34%	5.43%
9/9/2015	-1.29%	-1.44%
9/10/2015	0.44%	0.47%
9/11/2015	0.34%	0.01%
9/14/2015	-0.42%	-0.89%
9/15/2015	1.14%	1.88%
9/16/2015	0.95%	0.83%
9/17/2015	-0.07%	-3.15%
9/18/2015	-1.54%	-3.44%
9/21/2015	0.33%	1.90%
9/22/2015	-1.37%	-2.01%
9/23/2015	-0.35%	0.44%
9/24/2015	-0.37%	-1.81%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
9/25/2015	-0.21%	1.74%
9/28/2015	-2.74%	-4.29%
9/29/2015	-0.09%	0.63%
9/30/2015	1.92%	2.96%
10/1/2015	0.19%	-0.03%
10/2/2015	1.51%	-2.32%
10/5/2015	1.86%	2.49%
10/6/2015	-0.31%	-2.07%
10/7/2015	0.98%	1.57%
10/8/2015	0.85%	0.69%
10/9/2015	0.14%	-0.57%
10/12/2015	-0.02%	0.61%
10/13/2015	-0.78%	-1.02%
10/14/2015	-0.43%	-1.39%
10/15/2015	1.46%	2.50%
10/16/2015	0.34%	0.74%
10/19/2015	-0.07%	-0.13%
10/20/2015	-0.12%	1.84%
10/21/2015	-0.81%	-1.46%
10/22/2015	1.39%	2.08%
10/23/2015	0.95%	2.92%
10/26/2015	-0.28%	0.02%
10/27/2015	-0.45%	-1.76%
10/28/2015	1.36%	3.74%
10/29/2015	-0.22%	0.24%
10/30/2015	-0.40%	-0.93%
11/2/2015	1.24%	3.03%
11/3/2015	0.31%	-0.01%
11/4/2015	-0.34%	0.06%
11/5/2015	-0.14%	0.27%
11/6/2015	-0.04%	4.02%
11/9/2015	-0.97%	-0.47%
11/10/2015	0.13%	-0.33%
11/11/2015	-0.41%	0.28%
11/12/2015	-1.46%	-2.01%
11/13/2015	-0.98%	-1.40%
11/16/2015	1.37%	1.15%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
11/17/2015	-0.14%	0.54%
11/18/2015	1.52%	1.69%
11/19/2015	-0.10%	-0.68%
11/20/2015	0.30%	0.76%
11/23/2015	-0.07%	-0.42%
11/24/2015	0.24%	0.33%
11/25/2015	0.12%	0.44%
11/27/2015	0.08%	0.39%
11/30/2015	-0.39%	-0.19%
12/1/2015	0.95%	0.97%
12/2/2015	-1.08%	-0.81%
12/3/2015	-1.44%	-1.74%
12/4/2015	1.63%	3.45%
12/7/2015	-0.98%	-1.31%
12/8/2015	-0.61%	-0.63%
12/9/2015	-0.66%	-2.20%
12/10/2015	0.20%	0.81%
12/11/2015	-2.00%	-3.72%
12/14/2015	0.16%	0.84%
12/15/2015	1.12%	2.40%
12/16/2015	1.48%	1.31%
12/17/2015	-1.47%	-1.73%
12/18/2015	-1.52%	-3.18%
12/21/2015	0.71%	0.59%
12/22/2015	0.88%	1.79%
12/23/2015	1.36%	0.69%
12/24/2015	-0.08%	0.06%
12/28/2015	-0.33%	0.18%
12/29/2015	1.00%	1.11%
12/30/2015	-0.74%	-0.59%
12/31/2015	-0.82%	-0.84%
1/4/2016	-1.50%	-3.02%
1/5/2016	0.14%	-0.24%
1/6/2016	-1.39%	-2.86%
1/7/2016	-2.42%	-4.37%
1/8/2016	-1.10%	-0.68%
1/11/2016	-0.17%	-0.73%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
1/12/2016	0.61%	1.30%
1/13/2016	-2.62%	-4.44%
1/14/2016	1.53%	1.30%
1/15/2016	-2.19%	-3.28%
1/19/2016	-0.24%	-1.38%
1/20/2016	-1.07%	-3.09%
1/21/2016	0.57%	-2.01%
1/22/2016	2.22%	3.87%
1/25/2016	-1.68%	-2.20%
1/26/2016	1.58%	1.03%
1/27/2016	-1.06%	-0.81%
1/28/2016	0.51%	-1.46%
1/29/2016	2.43%	2.23%
2/1/2016	-0.04%	-0.54%
2/2/2016	-2.02%	-4.23%
2/3/2016	0.57%	0.44%
2/4/2016	0.36%	2.15%
2/5/2016	-1.98%	-1.79%
2/8/2016	-1.71%	-3.20%
2/9/2016	-0.31%	-0.53%
2/10/2016	0.03%	-0.95%
2/11/2016	-1.20%	-2.02%
2/12/2016	1.99%	2.72%
2/16/2016	1.75%	2.97%
2/17/2016	1.79%	3.01%
2/18/2016	-0.42%	-0.86%
2/19/2016	-0.02%	1.15%
2/22/2016	1.42%	0.77%
2/23/2016	-1.19%	-1.09%
2/24/2016	0.50%	-1.01%
2/25/2016	1.10%	1.77%
2/26/2016	0.03%	3.50%
2/29/2016	-0.59%	-1.86%
3/1/2016	2.21%	4.54%
3/2/2016	0.57%	0.90%
3/3/2016	0.56%	1.12%
3/4/2016	0.41%	0.20%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
3/7/2016	0.32%	1.26%
3/8/2016	-1.36%	-2.90%
3/9/2016	0.56%	-0.06%
3/10/2016	-0.13%	-0.09%
3/11/2016	1.73%	4.23%
3/14/2016	-0.16%	-1.05%
3/15/2016	-0.45%	-0.98%
3/16/2016	0.75%	-1.85%
3/17/2016	0.82%	2.13%
3/18/2016	0.39%	1.86%
3/21/2016	0.05%	-0.37%
3/22/2016	-0.04%	0.34%
3/23/2016	-0.95%	-1.24%
3/24/2016	-0.02%	-0.09%
3/28/2016	0.08%	0.00%
3/29/2016	1.10%	0.28%
3/30/2016	0.45%	0.75%
3/31/2016	-0.09%	-0.27%
4/1/2016	0.46%	1.42%
4/4/2016	-0.44%	-1.24%
4/5/2016	-1.01%	-1.84%
4/6/2016	1.10%	1.27%
4/7/2016	-1.17%	-4.56%
4/8/2016	0.43%	0.38%
4/11/2016	-0.18%	1.21%
4/12/2016	1.03%	1.47%
4/13/2016	1.12%	3.68%
4/14/2016	-0.04%	0.18%
4/15/2016	-0.06%	-0.79%
4/18/2016	0.67%	0.76%
4/19/2016	0.45%	-0.57%
4/20/2016	0.12%	0.90%
4/21/2016	-0.53%	0.11%
4/22/2016	0.18%	1.62%
4/25/2016	-0.28%	-0.48%
4/26/2016	0.33%	0.80%
4/27/2016	0.26%	-0.16%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
4/28/2016	-0.86%	-2.88%
4/29/2016	-0.45%	-1.39%
5/2/2016	0.67%	1.08%
5/3/2016	-1.12%	-2.39%
5/4/2016	-0.62%	-1.34%
5/5/2016	-0.05%	0.02%
5/6/2016	0.35%	-0.48%
5/9/2016	-0.02%	0.18%
5/10/2016	1.22%	2.25%
5/11/2016	-0.83%	-0.82%
5/12/2016	-0.08%	0.33%
5/13/2016	-0.80%	-1.41%
5/16/2016	1.02%	0.62%
5/17/2016	-0.86%	0.07%
5/18/2016	-0.08%	4.26%
5/19/2016	-0.38%	-0.85%
5/20/2016	0.76%	1.59%
5/23/2016	-0.18%	-0.25%
5/24/2016	1.30%	3.10%
5/25/2016	0.73%	1.01%
5/26/2016	-0.01%	-1.21%
5/27/2016	0.44%	1.58%
5/31/2016	-0.03%	0.13%
6/1/2016	0.24%	0.20%
6/2/2016	0.36%	0.31%
6/3/2016	-0.19%	-4.29%
6/6/2016	0.61%	1.65%
6/7/2016	0.21%	-0.85%
6/8/2016	0.36%	-0.17%
6/9/2016	-0.28%	-1.14%
6/10/2016	-1.13%	-2.08%
6/13/2016	-0.82%	-1.19%
6/14/2016	-0.28%	-1.00%
6/15/2016	-0.05%	1.00%
6/16/2016	0.19%	0.03%
6/17/2016	-0.18%	-0.52%
6/20/2016	0.72%	1.09%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
6/21/2016	0.23%	-0.55%
6/22/2016	-0.19%	0.08%
6/23/2016	1.43%	3.96%
6/24/2016	-3.72%	-10.08%
6/27/2016	-2.05%	-6.17%
6/28/2016	1.79%	1.98%
6/29/2016	1.74%	2.66%
6/30/2016	1.31%	1.23%
7/1/2016	0.30%	-0.96%
7/5/2016	-0.82%	-2.62%
7/6/2016	0.54%	0.76%
7/7/2016	-0.07%	1.83%
7/8/2016	1.53%	1.61%
7/11/2016	0.42%	0.38%
7/12/2016	0.79%	3.13%
7/13/2016	-0.02%	-0.73%
7/14/2016	0.47%	1.49%
7/15/2016	-0.08%	0.35%
7/18/2016	0.26%	0.01%
7/19/2016	-0.24%	1.25%
7/20/2016	0.46%	0.93%
7/21/2016	-0.33%	-0.17%
7/22/2016	0.45%	1.12%
7/25/2016	-0.32%	-0.22%
7/26/2016	0.16%	1.01%
7/27/2016	-0.13%	0.15%
7/28/2016	0.17%	0.23%
7/29/2016	0.26%	-0.73%
8/1/2016	-0.23%	-0.30%
8/2/2016	-0.71%	-1.34%
8/3/2016	0.44%	1.43%
8/4/2016	0.08%	0.42%
8/5/2016	0.80%	3.67%
8/8/2016	0.01%	-0.03%
8/9/2016	0.11%	-0.14%
8/10/2016	-0.26%	-1.14%
8/11/2016	0.48%	0.80%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
8/12/2016	-0.05%	-0.56%
8/15/2016	0.40%	1.37%
8/16/2016	-0.55%	-0.28%
8/17/2016	0.10%	-0.10%
8/18/2016	0.34%	0.17%
8/19/2016	-0.18%	0.61%
8/22/2016	-0.04%	-0.68%
8/23/2016	0.28%	0.76%
8/24/2016	-0.61%	-0.27%
8/25/2016	-0.06%	0.79%
8/26/2016	-0.18%	1.29%
8/29/2016	0.52%	0.40%
8/30/2016	-0.15%	1.36%
8/31/2016	-0.26%	-0.30%
9/1/2016	0.08%	-1.08%
9/2/2016	0.59%	0.84%
9/6/2016	0.34%	-1.51%
9/7/2016	0.08%	0.38%
9/8/2016	-0.21%	0.27%
9/9/2016	-2.53%	-1.16%
9/12/2016	1.33%	1.29%
9/13/2016	-1.60%	-1.44%
9/14/2016	-0.05%	-0.42%
9/15/2016	1.00%	2.56%
9/16/2016	-0.39%	-0.95%
9/19/2016	0.14%	0.92%
9/20/2016	-0.04%	-0.47%
9/21/2016	1.18%	1.07%
9/22/2016	0.78%	0.45%
9/23/2016	-0.60%	-1.32%
9/26/2016	-0.83%	-1.18%
9/27/2016	0.51%	-0.04%
9/28/2016	0.67%	0.60%
9/29/2016	-0.92%	0.11%
9/30/2016	0.78%	2.17%
10/3/2016	-0.31%	-0.47%
10/4/2016	-0.56%	0.57%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
10/5/2016	0.49%	2.00%
10/6/2016	-0.07%	-0.33%
10/7/2016	-0.38%	-0.07%
10/10/2016	0.56%	0.00%
10/11/2016	-1.27%	-1.56%
10/12/2016	0.09%	-0.18%
10/13/2016	-0.33%	-0.78%
10/14/2016	-0.03%	1.32%
10/17/2016	-0.25%	-0.78%
10/18/2016	0.65%	1.15%
10/19/2016	0.30%	0.65%
10/20/2016	-0.17%	-0.81%
10/21/2016	-0.01%	0.94%
10/24/2016	0.44%	-1.26%
10/25/2016	-0.44%	-1.76%
10/26/2016	-0.28%	0.64%
10/27/2016	-0.40%	-0.28%
10/28/2016	-0.26%	-0.76%
10/31/2016	0.04%	-0.13%
11/1/2016	-0.68%	-0.47%
11/2/2016	-0.77%	-1.59%
11/3/2016	-0.40%	0.44%
11/4/2016	-0.12%	-0.42%
11/7/2016	2.07%	3.45%
11/8/2016	0.39%	0.33%
11/9/2016	1.20%	3.40%
11/10/2016	0.19%	3.30%
11/11/2016	0.02%	1.87%
11/14/2016	0.24%	1.55%
11/15/2016	0.79%	0.82%
11/16/2016	-0.15%	-0.57%
11/17/2016	0.46%	1.49%
11/18/2016	-0.14%	0.86%
11/21/2016	0.77%	0.96%
11/22/2016	0.30%	0.39%
11/23/2016	0.09%	1.66%
11/25/2016	0.36%	-0.14%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
11/28/2016	-0.60%	-1.43%
11/29/2016	0.10%	0.37%
11/30/2016	-0.16%	0.35%
12/1/2016	-0.42%	1.77%
12/2/2016	0.07%	-1.25%
12/5/2016	0.73%	0.91%
12/6/2016	0.47%	0.52%
12/7/2016	1.23%	0.61%
12/8/2016	0.37%	0.49%
12/9/2016	0.39%	0.19%
12/12/2016	-0.24%	-1.06%
12/13/2016	0.58%	0.13%
12/14/2016	-0.97%	-0.04%
12/15/2016	0.36%	1.21%
12/16/2016	-0.11%	-1.26%
12/19/2016	0.21%	-0.04%
12/20/2016	0.43%	2.09%
12/21/2016	-0.25%	-0.30%
12/22/2016	-0.27%	-0.59%
12/23/2016	0.18%	1.03%
12/27/2016	0.25%	0.33%
12/28/2016	-0.80%	-1.47%
12/29/2016	0.06%	-0.64%
12/30/2016	-0.40%	-0.01%
1/3/2017	0.82%	1.52%
1/4/2017	0.86%	2.63%
1/5/2017	-0.09%	0.13%
1/6/2017	0.23%	0.83%
1/9/2017	-0.39%	-0.41%
1/10/2017	0.13%	0.30%
1/11/2017	0.32%	0.24%
1/12/2017	-0.26%	-0.29%
1/13/2017	0.28%	0.45%
1/17/2017	-0.37%	-2.32%
1/18/2017	0.14%	1.63%
1/19/2017	-0.39%	-0.00%
1/20/2017	0.36%	-0.06%

Exhibit-4**Market and Peer Index Returns**

March 15, 2012 through February 7, 2017

Date	Market Index Return	Peer Index Return
1/23/2017	-0.19%	-0.20%
1/24/2017	0.83%	1.03%
1/25/2017	0.80%	1.09%
1/26/2017	-0.11%	0.37%
1/27/2017	-0.16%	0.01%
1/30/2017	-0.71%	-0.84%
1/31/2017	0.08%	-0.97%
2/1/2017	0.03%	0.25%
2/2/2017	0.06%	-5.22%
2/3/2017	0.78%	2.04%
2/6/2017	-0.27%	-0.44%
2/7/2017	-0.05%	-0.14%

Sources: Bloomberg and CRSP.

Exhibit-5a**FXCM Inc. Common Stock Regression Results**

Estimation Period: March 15, 2012 through February 1, 2013

Regression Statistics			
R Squared	0.298		
Adjusted R Squared	0.236		
Standard Error	2.05%		
Observations	222		

	Coefficients	Standard Error	t- statistic
Intercept	0.03%	0.14%	0.212
Market Index	0.691	0.295	2.341
Peer Index	0.357	0.181	1.971
April 17, 2012	-0.20%	2.08%	-0.094
May 9, 2012	-1.57%	2.06%	-0.760
June 7, 2012	4.92%	2.07%	2.380
June 14, 2012	5.68%	2.06%	2.750
June 18, 2012	-1.40%	2.06%	-0.678
June 21, 2012	-0.15%	2.10%	-0.070
June 25, 2012	0.50%	2.08%	0.239
July 17, 2012	-3.00%	2.06%	-1.456
August 9, 2012	-5.65%	2.06%	-2.739
August 13, 2012	-1.72%	2.06%	-0.834
August 31, 2012	-2.67%	2.06%	-1.298
September 19, 2012	-1.92%	2.08%	-0.922
October 16, 2012	-3.76%	2.07%	-1.812
November 8, 2012	6.05%	2.07%	2.915
December 18, 2012	-1.47%	2.07%	-0.710
January 16, 2013	-1.91%	2.07%	-0.923

Exhibit-5b**FXCM Inc. Common Stock Regression Results**

Estimation Period: February 4, 2013 through February 3, 2014

Regression Statistics			
R Squared	0.418		
Adjusted R Squared	0.359		
Standard Error	1.51%		
Observations	252		

	Coefficients	Standard Error	t- statistic
Intercept	0.08%	0.10%	0.782
Market Index	0.303	0.197	1.533
Peer Index	0.346	0.105	3.295
February 12, 2013	2.67%	1.52%	1.764
March 7, 2013	-1.44%	1.52%	-0.948
March 11, 2013	3.43%	1.51%	2.269
April 9, 2013	1.26%	1.51%	0.829
April 15, 2013	-4.49%	1.56%	-2.879
April 26, 2013	-1.11%	1.51%	-0.732
May 7, 2013	3.12%	1.52%	2.051
May 28, 2013	-5.26%	1.54%	-3.425
May 29, 2013	-0.71%	1.52%	-0.464
May 31, 2013	-0.07%	1.53%	-0.047
June 4, 2013	0.04%	1.52%	0.024
June 6, 2013	1.63%	1.52%	1.072
June 14, 2013	0.44%	1.52%	0.292
July 16, 2013	4.56%	1.53%	2.984
August 7, 2013	7.38%	1.52%	4.865
September 11, 2013	-3.32%	1.52%	-2.187
October 17, 2013	-4.11%	1.52%	-2.708
November 7, 2013	-7.64%	1.53%	-5.000
November 19, 2013	1.41%	1.52%	0.933
December 17, 2013	1.16%	1.52%	0.762
January 14, 2014	-3.64%	1.52%	-2.392

Exhibit-5c**FXCM Inc. Common Stock Regression Results**

Estimation Period: February 4, 2014 through February 5, 2015

Regression Statistics			
R Squared	0.770		
Adjusted R Squared	0.748		
Standard Error	2.10%		
Observations	252		

	Coefficients	Standard Error	t- statistic
Intercept	-0.05%	0.14%	-0.369
Market Index	0.040	0.314	0.127
Peer Index	0.454	0.157	2.883
February 11, 2014	-3.84%	2.11%	-1.821
March 6, 2014	-1.44%	2.10%	-0.684
April 15, 2014	-1.85%	2.11%	-0.878
May 8, 2014	-5.74%	2.10%	-2.727
June 10, 2014	6.26%	2.11%	2.974
June 16, 2014	3.34%	2.10%	1.592
July 16, 2014	-0.45%	2.10%	-0.213
August 8, 2014	-2.09%	2.11%	-0.993
September 10, 2014	2.93%	2.11%	1.388
September 22, 2014	-0.98%	2.11%	-0.463
October 17, 2014	-0.43%	2.11%	-0.202
November 7, 2014	-4.67%	2.11%	-2.210
December 10, 2014	-2.99%	2.13%	-1.403
January 14, 2015	-10.46%	2.12%	-4.940
January 21, 2015	37.68%	2.11%	17.898
January 22, 2015	27.25%	2.12%	12.860
January 23, 2015	-26.66%	2.10%	-12.681
January 26, 2015	2.66%	2.10%	1.267
January 30, 2015	-1.05%	2.12%	-0.498
February 2, 2015	-4.55%	2.11%	-2.153

Exhibit-5d**FXCM Inc. Common Stock Regression Results**

Estimation Period: February 6, 2015 through February 5, 2016

Regression Statistics			
R Squared	0.268		
Adjusted R Squared	0.165		
Standard Error	6.59%		
Observations	252		

	Coefficients	Standard Error	t- statistic
Intercept	-0.27%	0.44%	-0.610
Market Index	0.023	0.720	0.032
Peer Index	0.579	0.451	1.284
February 12, 2015	-1.38%	6.63%	-0.208
March 13, 2015	19.19%	6.61%	2.904
March 17, 2015	-0.45%	6.61%	-0.068
March 25, 2015	2.70%	6.63%	0.406
April 7, 2015	2.49%	6.60%	0.377
April 15, 2015	0.12%	6.61%	0.018
April 21, 2015	0.16%	6.60%	0.024
May 11, 2015	-10.02%	6.69%	-1.499
May 22, 2015	-6.74%	6.60%	-1.021
May 28, 2015	-5.25%	6.60%	-0.795
June 10, 2015	-0.31%	6.63%	-0.047
June 15, 2015	-0.01%	6.60%	-0.002
July 15, 2015	-1.92%	6.60%	-0.291
August 7, 2015	-6.55%	6.60%	-0.993
September 10, 2015	5.08%	6.60%	0.769
September 14, 2015	-3.71%	6.61%	-0.561
September 17, 2015	2.35%	6.74%	0.348
September 21, 2015	-7.30%	6.64%	-1.099
September 23, 2015	0.34%	6.61%	0.052
September 30, 2015	0.84%	6.66%	0.125
October 1, 2015	-7.98%	6.60%	-1.209
October 8, 2015	-3.54%	6.61%	-0.535
October 14, 2015	7.26%	6.61%	1.098
November 6, 2015	-2.95%	6.85%	-0.430
December 14, 2015	41.95%	6.61%	6.348
December 15, 2015	-18.98%	6.64%	-2.861
January 13, 2016	-15.04%	6.72%	-2.238
January 27, 2016	9.03%	6.62%	1.363
February 2, 2016	-4.35%	6.70%	-0.649

Exhibit-5e**FXCM Inc. Common Stock Regression Results**

Estimation Period: February 8, 2016 through February 6, 2017

Regression Statistics			
R Squared	0.376		
Adjusted R Squared	0.310		
Standard Error	3.29%		
Observations	252		

	Coefficients	Standard Error	t- statistic
Intercept	-0.24%	0.22%	-1.098
Market Index	1.346	0.476	2.831
Peer Index	0.388	0.205	1.892
February 10, 2016	0.07%	3.30%	0.022
March 11, 2016	-30.93%	3.34%	-9.248
April 12, 2016	-3.17%	3.31%	-0.958
April 18, 2016	1.19%	3.30%	0.360
May 6, 2016	1.23%	3.31%	0.372
June 9, 2016	-8.47%	3.30%	-2.565
June 14, 2016	1.00%	3.30%	0.304
July 12, 2016	-3.01%	3.32%	-0.905
August 4, 2016	6.50%	3.30%	1.972
September 1, 2016	-0.30%	3.31%	-0.091
September 9, 2016	1.31%	3.47%	0.377
September 13, 2016	3.71%	3.35%	1.107
September 30, 2016	0.19%	3.31%	0.058
October 4, 2016	4.64%	3.32%	1.397
October 5, 2016	1.46%	3.31%	0.441
October 11, 2016	1.09%	3.33%	0.327
October 31, 2016	-2.92%	3.30%	-0.886
November 8, 2016	-1.69%	3.30%	-0.513
November 10, 2016	1.94%	3.35%	0.577
November 18, 2016	-2.44%	3.31%	-0.738
December 14, 2016	-3.82%	3.33%	-1.145
January 12, 2017	1.38%	3.30%	0.418

Exhibit-6**FXCM Inc. Common Stock Event Study Results**

Date	FXCM Closing Price	FXCM Prior Day Closing Price	FXCM Logarithmic Return	Market Index Logarithmic Return	Sector Index Return	FXCM Explained Return	FXCM Residual Return	<i>t</i>-statistic	Dollar Residual Return
2/7/2017	\$3.45	\$6.85	-68.59%	-0.05%	-0.14%	-0.37%	-68.22%	-20.73 ***	(\$3.39)

Notes:

"*" indicates statistical significance at the 90% confidence level.

"**" indicates statistical significance at the 95% confidence level.

"***" indicates statistical significance at the 99% confidence level.

Exhibit-7**FXCM Inc. Notes VWAPs**

June 25, 2014 through February 7, 2017

Date	FXCM Notes Logarithmic Return
6/25/2014	0.03%
9/11/2014	0.66%
9/23/2014	-0.70%
10/14/2014	-0.56%
10/15/2014	-0.19%
10/31/2014	1.38%
12/10/2014	0.15%
1/16/2015	-58.58%
1/20/2015	-16.92%
1/21/2015	10.05%
1/22/2015	16.09%
1/23/2015	4.30%
1/26/2015	2.47%
1/27/2015	-0.71%
1/28/2015	6.96%
1/29/2015	2.53%
1/30/2015	0.81%
2/4/2015	0.67%
2/5/2015	-0.70%
2/6/2015	0.86%
2/17/2015	-1.15%
2/18/2015	0.86%
2/19/2015	0.34%
2/20/2015	-0.85%
2/23/2015	-0.23%
2/24/2015	-0.64%
2/25/2015	0.00%
2/26/2015	0.61%
2/27/2015	0.57%
3/5/2015	-0.17%
3/16/2015	-0.05%
3/17/2015	0.83%
3/18/2015	-0.75%
3/19/2015	0.25%
3/20/2015	0.06%
3/25/2015	2.72%

Exhibit-7**FXCM Inc. Notes VWAPs**

June 25, 2014 through February 7, 2017

Date	FXCM Notes Logarithmic Return
3/26/2015	0.24%
3/27/2015	-0.12%
3/30/2015	0.57%
4/14/2015	1.32%
5/6/2015	-0.36%
5/11/2015	-0.54%
5/12/2015	0.46%
5/13/2015	-0.00%
5/14/2015	-2.01%
5/15/2015	1.92%
5/18/2015	0.53%
5/19/2015	-0.50%
5/20/2015	0.22%
5/27/2015	-1.04%
6/25/2015	0.00%
7/31/2015	-3.53%
10/12/2015	-3.23%
10/15/2015	-0.42%
10/16/2015	-0.12%
10/28/2015	-0.15%
11/9/2015	1.47%
11/10/2015	-2.52%
11/16/2015	0.87%
11/17/2015	-0.59%
11/27/2015	0.86%
12/4/2015	0.11%
12/24/2015	-0.18%
12/30/2015	0.36%
4/7/2016	0.00%
7/25/2016	-5.70%
8/16/2016	0.00%
2/7/2017	-42.18%

Source: CRSP.

Exhibit-8**FXCM Inc. Notes Regression Results**

Estimation Period: June 24, 2014 through August 16, 2016

Regression Statistics	
R Squared	0.829
Adjusted R Squared	0.791
Standard Error	1.62%
Observations	66

	Coefficients	Standard Error	t- statistic
Intercept	0.01%	0.22%	0.027
Market Index	-31.42%	42.51%	-0.739
Peer Index	-1.70%	20.46%	-0.083
December 10, 2014	-0.45%	1.75%	-0.256
January 20, 2015	-16.91%	1.64%	-10.293
January 21, 2015	10.19%	1.65%	6.179
January 22, 2015	16.59%	1.70%	9.769
January 23, 2015	4.15%	1.65%	2.518
January 26, 2015	2.61%	1.64%	1.589
January 30, 2015	0.39%	1.70%	0.232
March 17, 2015	0.78%	1.65%	0.471
March 25, 2015	2.22%	1.72%	1.290
May 11, 2015	-0.64%	1.72%	-0.374

Exhibit-9
FXCM Inc. Notes Event Study Results

Date	FXCM Notes VWAP	FXCM Notes Prior Day VWAP	FXCM Notes Logarithmic Return	Market Index Logarithmic Return	Sector Index Return	FXCM Notes Explained Return	FXCM Notes Residual Return	<i>t</i>-statistic	Dollar Residual Return Per \$100 of Par
2/7/2017	\$30.99	\$47.25	-42.18%	-0.05%	-0.14%	0.17%	-42.35%	-26.08 ***	(\$16.31)

Notes:

"*" indicates statistical significance at the 90% confidence level.

"**" indicates statistical significance at the 95% confidence level.

"***" indicates statistical significance at the 99% confidence level.

Exhibit-10**FXCM Inc. Common Stock Closing Prices**

Date	FXCM Closing Price
2/7/2017	\$3.45
2/8/2017	\$2.90
2/9/2017	\$3.00
2/10/2017	\$2.90
2/13/2017	\$2.90
2/14/2017	\$2.80
2/15/2017	\$2.85
2/16/2017	\$2.95
2/17/2017	\$2.90
2/21/2017	\$2.80
2/22/2017	\$2.85
2/23/2017	\$2.75
2/24/2017	\$2.80
2/27/2017	\$2.90
2/28/2017	\$2.75
3/1/2017	\$2.60
3/2/2017	\$2.60
3/3/2017	\$2.50
3/6/2017	\$2.27
3/7/2017	\$2.31
3/8/2017	\$2.30
3/9/2017	\$2.33
3/10/2017	\$2.30
3/13/2017	\$2.05
3/14/2017	\$2.05
3/15/2017	\$1.75
3/16/2017	\$1.71
3/17/2017	\$1.45
3/20/2017	\$1.45
3/21/2017	\$1.65
3/22/2017	\$1.75
3/23/2017	\$1.90
3/24/2017	\$2.15
3/27/2017	\$2.25
3/28/2017	\$2.50
3/29/2017	\$2.50
3/30/2017	\$2.55
3/31/2017	\$2.70

Exhibit-10**FXCM Inc. Common Stock Closing Prices**

Date	FXCM Closing Price
4/3/2017	\$2.50
4/4/2017	\$2.25
4/5/2017	\$2.20
4/6/2017	\$2.15
4/7/2017	\$2.00
4/10/2017	\$2.15
4/11/2017	\$2.30
4/12/2017	\$2.20
4/13/2017	\$2.18
4/17/2017	\$2.25
4/18/2017	\$2.20
4/19/2017	\$2.20
4/20/2017	\$2.10
4/21/2017	\$2.10
4/24/2017	\$2.15
4/25/2017	\$2.20
4/26/2017	\$2.15
4/27/2017	\$2.00
4/28/2017	\$2.10
5/1/2017	\$2.05
5/2/2017	\$2.05
5/3/2017	\$2.00
5/4/2017	\$2.05
5/5/2017	\$1.95

Source: CRSP.

Exhibit-11**FXCM Inc. Notes VWAPS**

Date	FXCM Closing Price
2/7/2017	\$30.99
2/11/2017	\$30.75
3/13/2017	\$31.88
3/16/2017	\$27.25
3/20/2017	\$27.55
3/23/2017	\$34.13

Source: CRSP.

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
3/15/2012	\$3.39
3/16/2012	\$3.39
3/19/2012	\$3.39
3/20/2012	\$3.39
3/21/2012	\$3.39
3/22/2012	\$3.39
3/23/2012	\$3.39
3/26/2012	\$3.39
3/27/2012	\$3.39
3/28/2012	\$3.39
3/29/2012	\$3.39
3/30/2012	\$3.39
4/2/2012	\$3.39
4/3/2012	\$3.39
4/4/2012	\$3.39
4/5/2012	\$3.39
4/9/2012	\$3.39
4/10/2012	\$3.39
4/11/2012	\$3.39
4/12/2012	\$3.39
4/13/2012	\$3.39
4/16/2012	\$3.39
4/17/2012	\$3.39
4/18/2012	\$3.39
4/19/2012	\$3.39
4/20/2012	\$3.39
4/23/2012	\$3.39
4/24/2012	\$3.39
4/25/2012	\$3.39
4/26/2012	\$3.39
4/27/2012	\$3.39
4/30/2012	\$3.39
5/1/2012	\$3.39
5/2/2012	\$3.39
5/3/2012	\$3.39
5/4/2012	\$3.39
5/7/2012	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
5/8/2012	\$3.39
5/9/2012	\$3.39
5/10/2012	\$3.39
5/11/2012	\$3.39
5/14/2012	\$3.39
5/15/2012	\$3.39
5/16/2012	\$3.39
5/17/2012	\$3.39
5/18/2012	\$3.39
5/21/2012	\$3.39
5/22/2012	\$3.39
5/23/2012	\$3.39
5/24/2012	\$3.39
5/25/2012	\$3.39
5/29/2012	\$3.39
5/30/2012	\$3.39
5/31/2012	\$3.39
6/1/2012	\$3.39
6/4/2012	\$3.39
6/5/2012	\$3.39
6/6/2012	\$3.39
6/7/2012	\$3.39
6/8/2012	\$3.39
6/11/2012	\$3.39
6/12/2012	\$3.39
6/13/2012	\$3.39
6/14/2012	\$3.39
6/15/2012	\$3.39
6/18/2012	\$3.39
6/19/2012	\$3.39
6/20/2012	\$3.39
6/21/2012	\$3.39
6/22/2012	\$3.39
6/25/2012	\$3.39
6/26/2012	\$3.39
6/27/2012	\$3.39
6/28/2012	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
6/29/2012	\$3.39
7/2/2012	\$3.39
7/3/2012	\$3.39
7/5/2012	\$3.39
7/6/2012	\$3.39
7/9/2012	\$3.39
7/10/2012	\$3.39
7/11/2012	\$3.39
7/12/2012	\$3.39
7/13/2012	\$3.39
7/16/2012	\$3.39
7/17/2012	\$3.39
7/18/2012	\$3.39
7/19/2012	\$3.39
7/20/2012	\$3.39
7/23/2012	\$3.39
7/24/2012	\$3.39
7/25/2012	\$3.39
7/26/2012	\$3.39
7/27/2012	\$3.39
7/30/2012	\$3.39
7/31/2012	\$3.39
8/1/2012	\$3.39
8/2/2012	\$3.39
8/3/2012	\$3.39
8/6/2012	\$3.39
8/7/2012	\$3.39
8/8/2012	\$3.39
8/9/2012	\$3.39
8/10/2012	\$3.39
8/13/2012	\$3.39
8/14/2012	\$3.39
8/15/2012	\$3.39
8/16/2012	\$3.39
8/17/2012	\$3.39
8/20/2012	\$3.39
8/21/2012	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
8/22/2012	\$3.39
8/23/2012	\$3.39
8/24/2012	\$3.39
8/27/2012	\$3.39
8/28/2012	\$3.39
8/29/2012	\$3.39
8/30/2012	\$3.39
8/31/2012	\$3.39
9/4/2012	\$3.39
9/5/2012	\$3.39
9/6/2012	\$3.39
9/7/2012	\$3.39
9/10/2012	\$3.39
9/11/2012	\$3.39
9/12/2012	\$3.39
9/13/2012	\$3.39
9/14/2012	\$3.39
9/17/2012	\$3.39
9/18/2012	\$3.39
9/19/2012	\$3.39
9/20/2012	\$3.39
9/21/2012	\$3.39
9/24/2012	\$3.39
9/25/2012	\$3.39
9/26/2012	\$3.39
9/27/2012	\$3.39
9/28/2012	\$3.39
10/1/2012	\$3.39
10/2/2012	\$3.39
10/3/2012	\$3.39
10/4/2012	\$3.39
10/5/2012	\$3.39
10/8/2012	\$3.39
10/9/2012	\$3.39
10/10/2012	\$3.39
10/11/2012	\$3.39
10/12/2012	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
10/15/2012	\$3.39
10/16/2012	\$3.39
10/17/2012	\$3.39
10/18/2012	\$3.39
10/19/2012	\$3.39
10/22/2012	\$3.39
10/23/2012	\$3.39
10/24/2012	\$3.39
10/25/2012	\$3.39
10/26/2012	\$3.39
10/31/2012	\$3.39
11/1/2012	\$3.39
11/2/2012	\$3.39
11/5/2012	\$3.39
11/6/2012	\$3.39
11/7/2012	\$3.39
11/8/2012	\$3.39
11/9/2012	\$3.39
11/12/2012	\$3.39
11/13/2012	\$3.39
11/14/2012	\$3.39
11/15/2012	\$3.39
11/16/2012	\$3.39
11/19/2012	\$3.39
11/20/2012	\$3.39
11/21/2012	\$3.39
11/23/2012	\$3.39
11/26/2012	\$3.39
11/27/2012	\$3.39
11/28/2012	\$3.39
11/29/2012	\$3.39
11/30/2012	\$3.39
12/3/2012	\$3.39
12/4/2012	\$3.39
12/5/2012	\$3.39
12/6/2012	\$3.39
12/7/2012	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
12/10/2012	\$3.39
12/11/2012	\$3.39
12/12/2012	\$3.39
12/13/2012	\$3.39
12/14/2012	\$3.39
12/17/2012	\$3.39
12/18/2012	\$3.39
12/19/2012	\$3.39
12/20/2012	\$3.39
12/21/2012	\$3.39
12/24/2012	\$3.39
12/26/2012	\$3.39
12/27/2012	\$3.39
12/28/2012	\$3.39
12/31/2012	\$3.39
1/2/2013	\$3.39
1/3/2013	\$3.39
1/4/2013	\$3.39
1/7/2013	\$3.39
1/8/2013	\$3.39
1/9/2013	\$3.39
1/10/2013	\$3.39
1/11/2013	\$3.39
1/14/2013	\$3.39
1/15/2013	\$3.39
1/16/2013	\$3.39
1/17/2013	\$3.39
1/18/2013	\$3.39
1/22/2013	\$3.39
1/23/2013	\$3.39
1/24/2013	\$3.39
1/25/2013	\$3.39
1/28/2013	\$3.39
1/29/2013	\$3.39
1/30/2013	\$3.39
1/31/2013	\$3.39
2/1/2013	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
2/4/2013	\$3.39
2/5/2013	\$3.39
2/6/2013	\$3.39
2/7/2013	\$3.39
2/8/2013	\$3.39
2/11/2013	\$3.39
2/12/2013	\$3.39
2/13/2013	\$3.39
2/14/2013	\$3.39
2/15/2013	\$3.39
2/19/2013	\$3.39
2/20/2013	\$3.39
2/21/2013	\$3.39
2/22/2013	\$3.39
2/25/2013	\$3.39
2/26/2013	\$3.39
2/27/2013	\$3.39
2/28/2013	\$3.39
3/1/2013	\$3.39
3/4/2013	\$3.39
3/5/2013	\$3.39
3/6/2013	\$3.39
3/7/2013	\$3.39
3/8/2013	\$3.39
3/11/2013	\$3.39
3/12/2013	\$3.39
3/13/2013	\$3.39
3/14/2013	\$3.39
3/15/2013	\$3.39
3/18/2013	\$3.39
3/19/2013	\$3.39
3/20/2013	\$3.39
3/21/2013	\$3.39
3/22/2013	\$3.39
3/25/2013	\$3.39
3/26/2013	\$3.39
3/27/2013	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
3/28/2013	\$3.39
4/1/2013	\$3.39
4/2/2013	\$3.39
4/3/2013	\$3.39
4/4/2013	\$3.39
4/5/2013	\$3.39
4/8/2013	\$3.39
4/9/2013	\$3.39
4/10/2013	\$3.39
4/11/2013	\$3.39
4/12/2013	\$3.39
4/15/2013	\$3.39
4/16/2013	\$3.39
4/17/2013	\$3.39
4/18/2013	\$3.39
4/19/2013	\$3.39
4/22/2013	\$3.39
4/23/2013	\$3.39
4/24/2013	\$3.39
4/25/2013	\$3.39
4/26/2013	\$3.39
4/29/2013	\$3.39
4/30/2013	\$3.39
5/1/2013	\$3.39
5/2/2013	\$3.39
5/3/2013	\$3.39
5/6/2013	\$3.39
5/7/2013	\$3.39
5/8/2013	\$3.39
5/9/2013	\$3.39
5/10/2013	\$3.39
5/13/2013	\$3.39
5/14/2013	\$3.39
5/15/2013	\$3.39
5/16/2013	\$3.39
5/17/2013	\$3.39
5/20/2013	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
5/21/2013	\$3.39
5/22/2013	\$3.39
5/23/2013	\$3.39
5/24/2013	\$3.39
5/28/2013	\$3.39
5/29/2013	\$3.39
5/30/2013	\$3.39
5/31/2013	\$3.39
6/3/2013	\$3.39
6/4/2013	\$3.39
6/5/2013	\$3.39
6/6/2013	\$3.39
6/7/2013	\$3.39
6/10/2013	\$3.39
6/11/2013	\$3.39
6/12/2013	\$3.39
6/13/2013	\$3.39
6/14/2013	\$3.39
6/17/2013	\$3.39
6/18/2013	\$3.39
6/19/2013	\$3.39
6/20/2013	\$3.39
6/21/2013	\$3.39
6/24/2013	\$3.39
6/25/2013	\$3.39
6/26/2013	\$3.39
6/27/2013	\$3.39
6/28/2013	\$3.39
7/1/2013	\$3.39
7/2/2013	\$3.39
7/3/2013	\$3.39
7/5/2013	\$3.39
7/8/2013	\$3.39
7/9/2013	\$3.39
7/10/2013	\$3.39
7/11/2013	\$3.39
7/12/2013	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
7/15/2013	\$3.39
7/16/2013	\$3.39
7/17/2013	\$3.39
7/18/2013	\$3.39
7/19/2013	\$3.39
7/22/2013	\$3.39
7/23/2013	\$3.39
7/24/2013	\$3.39
7/25/2013	\$3.39
7/26/2013	\$3.39
7/29/2013	\$3.39
7/30/2013	\$3.39
7/31/2013	\$3.39
8/1/2013	\$3.39
8/2/2013	\$3.39
8/5/2013	\$3.39
8/6/2013	\$3.39
8/7/2013	\$3.39
8/8/2013	\$3.39
8/9/2013	\$3.39
8/12/2013	\$3.39
8/13/2013	\$3.39
8/14/2013	\$3.39
8/15/2013	\$3.39
8/16/2013	\$3.39
8/19/2013	\$3.39
8/20/2013	\$3.39
8/21/2013	\$3.39
8/22/2013	\$3.39
8/23/2013	\$3.39
8/26/2013	\$3.39
8/27/2013	\$3.39
8/28/2013	\$3.39
8/29/2013	\$3.39
8/30/2013	\$3.39
9/3/2013	\$3.39
9/4/2013	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
9/5/2013	\$3.39
9/6/2013	\$3.39
9/9/2013	\$3.39
9/10/2013	\$3.39
9/11/2013	\$3.39
9/12/2013	\$3.39
9/13/2013	\$3.39
9/16/2013	\$3.39
9/17/2013	\$3.39
9/18/2013	\$3.39
9/19/2013	\$3.39
9/20/2013	\$3.39
9/23/2013	\$3.39
9/24/2013	\$3.39
9/25/2013	\$3.39
9/26/2013	\$3.39
9/27/2013	\$3.39
9/30/2013	\$3.39
10/1/2013	\$3.39
10/2/2013	\$3.39
10/3/2013	\$3.39
10/4/2013	\$3.39
10/7/2013	\$3.39
10/8/2013	\$3.39
10/9/2013	\$3.39
10/10/2013	\$3.39
10/11/2013	\$3.39
10/14/2013	\$3.39
10/15/2013	\$3.39
10/16/2013	\$3.39
10/17/2013	\$3.39
10/18/2013	\$3.39
10/21/2013	\$3.39
10/22/2013	\$3.39
10/23/2013	\$3.39
10/24/2013	\$3.39
10/25/2013	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
10/28/2013	\$3.39
10/29/2013	\$3.39
10/30/2013	\$3.39
10/31/2013	\$3.39
11/1/2013	\$3.39
11/4/2013	\$3.39
11/5/2013	\$3.39
11/6/2013	\$3.39
11/7/2013	\$3.39
11/8/2013	\$3.39
11/11/2013	\$3.39
11/12/2013	\$3.39
11/13/2013	\$3.39
11/14/2013	\$3.39
11/15/2013	\$3.39
11/18/2013	\$3.39
11/19/2013	\$3.39
11/20/2013	\$3.39
11/21/2013	\$3.39
11/22/2013	\$3.39
11/25/2013	\$3.39
11/26/2013	\$3.39
11/27/2013	\$3.39
11/29/2013	\$3.39
12/2/2013	\$3.39
12/3/2013	\$3.39
12/4/2013	\$3.39
12/5/2013	\$3.39
12/6/2013	\$3.39
12/9/2013	\$3.39
12/10/2013	\$3.39
12/11/2013	\$3.39
12/12/2013	\$3.39
12/13/2013	\$3.39
12/16/2013	\$3.39
12/17/2013	\$3.39
12/18/2013	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
12/19/2013	\$3.39
12/20/2013	\$3.39
12/23/2013	\$3.39
12/24/2013	\$3.39
12/26/2013	\$3.39
12/27/2013	\$3.39
12/30/2013	\$3.39
12/31/2013	\$3.39
1/2/2014	\$3.39
1/3/2014	\$3.39
1/6/2014	\$3.39
1/7/2014	\$3.39
1/8/2014	\$3.39
1/9/2014	\$3.39
1/10/2014	\$3.39
1/13/2014	\$3.39
1/14/2014	\$3.39
1/15/2014	\$3.39
1/16/2014	\$3.39
1/17/2014	\$3.39
1/21/2014	\$3.39
1/22/2014	\$3.39
1/23/2014	\$3.39
1/24/2014	\$3.39
1/27/2014	\$3.39
1/28/2014	\$3.39
1/29/2014	\$3.39
1/30/2014	\$3.39
1/31/2014	\$3.39
2/3/2014	\$3.39
2/4/2014	\$3.39
2/5/2014	\$3.39
2/6/2014	\$3.39
2/7/2014	\$3.39
2/10/2014	\$3.39
2/11/2014	\$3.39
2/12/2014	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
2/13/2014	\$3.39
2/14/2014	\$3.39
2/18/2014	\$3.39
2/19/2014	\$3.39
2/20/2014	\$3.39
2/21/2014	\$3.39
2/24/2014	\$3.39
2/25/2014	\$3.39
2/26/2014	\$3.39
2/27/2014	\$3.39
2/28/2014	\$3.39
3/3/2014	\$3.39
3/4/2014	\$3.39
3/5/2014	\$3.39
3/6/2014	\$3.39
3/7/2014	\$3.39
3/10/2014	\$3.39
3/11/2014	\$3.39
3/12/2014	\$3.39
3/13/2014	\$3.39
3/14/2014	\$3.39
3/17/2014	\$3.39
3/18/2014	\$3.39
3/19/2014	\$3.39
3/20/2014	\$3.39
3/21/2014	\$3.39
3/24/2014	\$3.39
3/25/2014	\$3.39
3/26/2014	\$3.39
3/27/2014	\$3.39
3/28/2014	\$3.39
3/31/2014	\$3.39
4/1/2014	\$3.39
4/2/2014	\$3.39
4/3/2014	\$3.39
4/4/2014	\$3.39
4/7/2014	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
4/8/2014	\$3.39
4/9/2014	\$3.39
4/10/2014	\$3.39
4/11/2014	\$3.39
4/14/2014	\$3.39
4/15/2014	\$3.39
4/16/2014	\$3.39
4/17/2014	\$3.39
4/21/2014	\$3.39
4/22/2014	\$3.39
4/23/2014	\$3.39
4/24/2014	\$3.39
4/25/2014	\$3.39
4/28/2014	\$3.39
4/29/2014	\$3.39
4/30/2014	\$3.39
5/1/2014	\$3.39
5/2/2014	\$3.39
5/5/2014	\$3.39
5/6/2014	\$3.39
5/7/2014	\$3.39
5/8/2014	\$3.39
5/9/2014	\$3.39
5/12/2014	\$3.39
5/13/2014	\$3.39
5/14/2014	\$3.39
5/15/2014	\$3.39
5/16/2014	\$3.39
5/19/2014	\$3.39
5/20/2014	\$3.39
5/21/2014	\$3.39
5/22/2014	\$3.39
5/23/2014	\$3.39
5/27/2014	\$3.39
5/28/2014	\$3.39
5/29/2014	\$3.39
5/30/2014	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
6/2/2014	\$3.39
6/3/2014	\$3.39
6/4/2014	\$3.39
6/5/2014	\$3.39
6/6/2014	\$3.39
6/9/2014	\$3.39
6/10/2014	\$3.39
6/11/2014	\$3.39
6/12/2014	\$3.39
6/13/2014	\$3.39
6/16/2014	\$3.39
6/17/2014	\$3.39
6/18/2014	\$3.39
6/19/2014	\$3.39
6/20/2014	\$3.39
6/23/2014	\$3.39
6/24/2014	\$3.39
6/25/2014	\$3.39
6/26/2014	\$3.39
6/27/2014	\$3.39
6/30/2014	\$3.39
7/1/2014	\$3.39
7/2/2014	\$3.39
7/3/2014	\$3.39
7/7/2014	\$3.39
7/8/2014	\$3.39
7/9/2014	\$3.39
7/10/2014	\$3.39
7/11/2014	\$3.39
7/14/2014	\$3.39
7/15/2014	\$3.39
7/16/2014	\$3.39
7/17/2014	\$3.39
7/18/2014	\$3.39
7/21/2014	\$3.39
7/22/2014	\$3.39
7/23/2014	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
7/24/2014	\$3.39
7/25/2014	\$3.39
7/28/2014	\$3.39
7/29/2014	\$3.39
7/30/2014	\$3.39
7/31/2014	\$3.39
8/1/2014	\$3.39
8/4/2014	\$3.39
8/5/2014	\$3.39
8/6/2014	\$3.39
8/7/2014	\$3.39
8/8/2014	\$3.39
8/11/2014	\$3.39
8/12/2014	\$3.39
8/13/2014	\$3.39
8/14/2014	\$3.39
8/15/2014	\$3.39
8/18/2014	\$3.39
8/19/2014	\$3.39
8/20/2014	\$3.39
8/21/2014	\$3.39
8/22/2014	\$3.39
8/25/2014	\$3.39
8/26/2014	\$3.39
8/27/2014	\$3.39
8/28/2014	\$3.39
8/29/2014	\$3.39
9/2/2014	\$3.39
9/3/2014	\$3.39
9/4/2014	\$3.39
9/5/2014	\$3.39
9/8/2014	\$3.39
9/9/2014	\$3.39
9/10/2014	\$3.39
9/11/2014	\$3.39
9/12/2014	\$3.39
9/15/2014	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
9/16/2014	\$3.39
9/17/2014	\$3.39
9/18/2014	\$3.39
9/19/2014	\$3.39
9/22/2014	\$3.39
9/23/2014	\$3.39
9/24/2014	\$3.39
9/25/2014	\$3.39
9/26/2014	\$3.39
9/29/2014	\$3.39
9/30/2014	\$3.39
10/1/2014	\$3.39
10/2/2014	\$3.39
10/3/2014	\$3.39
10/6/2014	\$3.39
10/7/2014	\$3.39
10/8/2014	\$3.39
10/9/2014	\$3.39
10/10/2014	\$3.39
10/13/2014	\$3.39
10/14/2014	\$3.39
10/15/2014	\$3.39
10/16/2014	\$3.39
10/17/2014	\$3.39
10/20/2014	\$3.39
10/21/2014	\$3.39
10/22/2014	\$3.39
10/23/2014	\$3.39
10/24/2014	\$3.39
10/27/2014	\$3.39
10/28/2014	\$3.39
10/29/2014	\$3.39
10/30/2014	\$3.39
10/31/2014	\$3.39
11/3/2014	\$3.39
11/4/2014	\$3.39
11/5/2014	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
11/6/2014	\$3.39
11/7/2014	\$3.39
11/10/2014	\$3.39
11/11/2014	\$3.39
11/12/2014	\$3.39
11/13/2014	\$3.39
11/14/2014	\$3.39
11/17/2014	\$3.39
11/18/2014	\$3.39
11/19/2014	\$3.39
11/20/2014	\$3.39
11/21/2014	\$3.39
11/24/2014	\$3.39
11/25/2014	\$3.39
11/26/2014	\$3.39
11/28/2014	\$3.39
12/1/2014	\$3.39
12/2/2014	\$3.39
12/3/2014	\$3.39
12/4/2014	\$3.39
12/5/2014	\$3.39
12/8/2014	\$3.39
12/9/2014	\$3.39
12/10/2014	\$3.39
12/11/2014	\$3.39
12/12/2014	\$3.39
12/15/2014	\$3.39
12/16/2014	\$3.39
12/17/2014	\$3.39
12/18/2014	\$3.39
12/19/2014	\$3.39
12/22/2014	\$3.39
12/23/2014	\$3.39
12/24/2014	\$3.39
12/26/2014	\$3.39
12/29/2014	\$3.39
12/30/2014	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
12/31/2014	\$3.39
1/2/2015	\$3.39
1/5/2015	\$3.39
1/6/2015	\$3.39
1/7/2015	\$3.39
1/8/2015	\$3.39
1/9/2015	\$3.39
1/12/2015	\$3.39
1/13/2015	\$3.39
1/14/2015	\$3.39
1/15/2015	\$3.39
1/16/2015	\$3.39
1/20/2015	\$3.39
1/21/2015	\$3.39
1/22/2015	\$3.39
1/23/2015	\$3.39
1/26/2015	\$3.39
1/27/2015	\$3.39
1/28/2015	\$3.39
1/29/2015	\$3.39
1/30/2015	\$3.39
2/2/2015	\$3.39
2/3/2015	\$3.39
2/4/2015	\$3.39
2/5/2015	\$3.39
2/6/2015	\$3.39
2/9/2015	\$3.39
2/10/2015	\$3.39
2/11/2015	\$3.39
2/12/2015	\$3.39
2/13/2015	\$3.39
2/17/2015	\$3.39
2/18/2015	\$3.39
2/19/2015	\$3.39
2/20/2015	\$3.39
2/23/2015	\$3.39
2/24/2015	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
2/25/2015	\$3.39
2/26/2015	\$3.39
2/27/2015	\$3.39
3/2/2015	\$3.39
3/3/2015	\$3.39
3/4/2015	\$3.39
3/5/2015	\$3.39
3/6/2015	\$3.39
3/9/2015	\$3.39
3/10/2015	\$3.39
3/11/2015	\$3.39
3/12/2015	\$3.39
3/13/2015	\$3.39
3/16/2015	\$3.39
3/17/2015	\$3.39
3/18/2015	\$3.39
3/19/2015	\$3.39
3/20/2015	\$3.39
3/23/2015	\$3.39
3/24/2015	\$3.39
3/25/2015	\$3.39
3/26/2015	\$3.39
3/27/2015	\$3.39
3/30/2015	\$3.39
3/31/2015	\$3.39
4/1/2015	\$3.39
4/2/2015	\$3.39
4/6/2015	\$3.39
4/7/2015	\$3.39
4/8/2015	\$3.39
4/9/2015	\$3.39
4/10/2015	\$3.39
4/13/2015	\$3.39
4/14/2015	\$3.39
4/15/2015	\$3.39
4/16/2015	\$3.39
4/17/2015	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
4/20/2015	\$3.39
4/21/2015	\$3.39
4/22/2015	\$3.39
4/23/2015	\$3.39
4/24/2015	\$3.39
4/27/2015	\$3.39
4/28/2015	\$3.39
4/29/2015	\$3.39
4/30/2015	\$3.39
5/1/2015	\$3.39
5/4/2015	\$3.39
5/5/2015	\$3.39
5/6/2015	\$3.39
5/7/2015	\$3.39
5/8/2015	\$3.39
5/11/2015	\$3.39
5/12/2015	\$3.39
5/13/2015	\$3.39
5/14/2015	\$3.39
5/15/2015	\$3.39
5/18/2015	\$3.39
5/19/2015	\$3.39
5/20/2015	\$3.39
5/21/2015	\$3.39
5/22/2015	\$3.39
5/26/2015	\$3.39
5/27/2015	\$3.39
5/28/2015	\$3.39
5/29/2015	\$3.39
6/1/2015	\$3.39
6/2/2015	\$3.39
6/3/2015	\$3.39
6/4/2015	\$3.39
6/5/2015	\$3.39
6/8/2015	\$3.39
6/9/2015	\$3.39
6/10/2015	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
6/11/2015	\$3.39
6/12/2015	\$3.39
6/15/2015	\$3.39
6/16/2015	\$3.39
6/17/2015	\$3.39
6/18/2015	\$3.39
6/19/2015	\$3.39
6/22/2015	\$3.39
6/23/2015	\$3.39
6/24/2015	\$3.39
6/25/2015	\$3.39
6/26/2015	\$3.39
6/29/2015	\$3.39
6/30/2015	\$3.39
7/1/2015	\$3.39
7/2/2015	\$3.39
7/6/2015	\$3.39
7/7/2015	\$3.39
7/8/2015	\$3.39
7/9/2015	\$3.39
7/10/2015	\$3.39
7/13/2015	\$3.39
7/14/2015	\$3.39
7/15/2015	\$3.39
7/16/2015	\$3.39
7/17/2015	\$3.39
7/20/2015	\$3.39
7/21/2015	\$3.39
7/22/2015	\$3.39
7/23/2015	\$3.39
7/24/2015	\$3.39
7/27/2015	\$3.39
7/28/2015	\$3.39
7/29/2015	\$3.39
7/30/2015	\$3.39
7/31/2015	\$3.39
8/3/2015	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
8/4/2015	\$3.39
8/5/2015	\$3.39
8/6/2015	\$3.39
8/7/2015	\$3.39
8/10/2015	\$3.39
8/11/2015	\$3.39
8/12/2015	\$3.39
8/13/2015	\$3.39
8/14/2015	\$3.39
8/17/2015	\$3.39
8/18/2015	\$3.39
8/19/2015	\$3.39
8/20/2015	\$3.39
8/21/2015	\$3.39
8/24/2015	\$3.39
8/25/2015	\$3.39
8/26/2015	\$3.39
8/27/2015	\$3.39
8/28/2015	\$3.39
8/31/2015	\$3.39
9/1/2015	\$3.39
9/2/2015	\$3.39
9/3/2015	\$3.39
9/4/2015	\$3.39
9/8/2015	\$3.39
9/9/2015	\$3.39
9/10/2015	\$3.39
9/11/2015	\$3.39
9/14/2015	\$3.39
9/15/2015	\$3.39
9/16/2015	\$3.39
9/17/2015	\$3.39
9/18/2015	\$3.39
9/21/2015	\$3.39
9/22/2015	\$3.39
9/23/2015	\$3.39
9/24/2015	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
9/25/2015	\$3.39
9/28/2015	\$3.39
9/29/2015	\$3.39
9/30/2015	\$3.39
10/1/2015	\$3.39
10/2/2015	\$3.39
10/5/2015	\$3.39
10/6/2015	\$3.39
10/7/2015	\$3.39
10/8/2015	\$3.39
10/9/2015	\$3.39
10/12/2015	\$3.39
10/13/2015	\$3.39
10/14/2015	\$3.39
10/15/2015	\$3.39
10/16/2015	\$3.39
10/19/2015	\$3.39
10/20/2015	\$3.39
10/21/2015	\$3.39
10/22/2015	\$3.39
10/23/2015	\$3.39
10/26/2015	\$3.39
10/27/2015	\$3.39
10/28/2015	\$3.39
10/29/2015	\$3.39
10/30/2015	\$3.39
11/2/2015	\$3.39
11/3/2015	\$3.39
11/4/2015	\$3.39
11/5/2015	\$3.39
11/6/2015	\$3.39
11/9/2015	\$3.39
11/10/2015	\$3.39
11/11/2015	\$3.39
11/12/2015	\$3.39
11/13/2015	\$3.39
11/16/2015	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
11/17/2015	\$3.39
11/18/2015	\$3.39
11/19/2015	\$3.39
11/20/2015	\$3.39
11/23/2015	\$3.39
11/24/2015	\$3.39
11/25/2015	\$3.39
11/27/2015	\$3.39
11/30/2015	\$3.39
12/1/2015	\$3.39
12/2/2015	\$3.39
12/3/2015	\$3.39
12/4/2015	\$3.39
12/7/2015	\$3.39
12/8/2015	\$3.39
12/9/2015	\$3.39
12/10/2015	\$3.39
12/11/2015	\$3.39
12/14/2015	\$3.39
12/15/2015	\$3.39
12/16/2015	\$3.39
12/17/2015	\$3.39
12/18/2015	\$3.39
12/21/2015	\$3.39
12/22/2015	\$3.39
12/23/2015	\$3.39
12/24/2015	\$3.39
12/28/2015	\$3.39
12/29/2015	\$3.39
12/30/2015	\$3.39
12/31/2015	\$3.39
1/4/2016	\$3.39
1/5/2016	\$3.39
1/6/2016	\$3.39
1/7/2016	\$3.39
1/8/2016	\$3.39
1/11/2016	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
1/12/2016	\$3.39
1/13/2016	\$3.39
1/14/2016	\$3.39
1/15/2016	\$3.39
1/19/2016	\$3.39
1/20/2016	\$3.39
1/21/2016	\$3.39
1/22/2016	\$3.39
1/25/2016	\$3.39
1/26/2016	\$3.39
1/27/2016	\$3.39
1/28/2016	\$3.39
1/29/2016	\$3.39
2/1/2016	\$3.39
2/2/2016	\$3.39
2/3/2016	\$3.39
2/4/2016	\$3.39
2/5/2016	\$3.39
2/8/2016	\$3.39
2/9/2016	\$3.39
2/10/2016	\$3.39
2/11/2016	\$3.39
2/12/2016	\$3.39
2/16/2016	\$3.39
2/17/2016	\$3.39
2/18/2016	\$3.39
2/19/2016	\$3.39
2/22/2016	\$3.39
2/23/2016	\$3.39
2/24/2016	\$3.39
2/25/2016	\$3.39
2/26/2016	\$3.39
2/29/2016	\$3.39
3/1/2016	\$3.39
3/2/2016	\$3.39
3/3/2016	\$3.39
3/4/2016	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
3/7/2016	\$3.39
3/8/2016	\$3.39
3/9/2016	\$3.39
3/10/2016	\$3.39
3/11/2016	\$3.39
3/14/2016	\$3.39
3/15/2016	\$3.39
3/16/2016	\$3.39
3/17/2016	\$3.39
3/18/2016	\$3.39
3/21/2016	\$3.39
3/22/2016	\$3.39
3/23/2016	\$3.39
3/24/2016	\$3.39
3/28/2016	\$3.39
3/29/2016	\$3.39
3/30/2016	\$3.39
3/31/2016	\$3.39
4/1/2016	\$3.39
4/4/2016	\$3.39
4/5/2016	\$3.39
4/6/2016	\$3.39
4/7/2016	\$3.39
4/8/2016	\$3.39
4/11/2016	\$3.39
4/12/2016	\$3.39
4/13/2016	\$3.39
4/14/2016	\$3.39
4/15/2016	\$3.39
4/18/2016	\$3.39
4/19/2016	\$3.39
4/20/2016	\$3.39
4/21/2016	\$3.39
4/22/2016	\$3.39
4/25/2016	\$3.39
4/26/2016	\$3.39
4/27/2016	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
4/28/2016	\$3.39
4/29/2016	\$3.39
5/2/2016	\$3.39
5/3/2016	\$3.39
5/4/2016	\$3.39
5/5/2016	\$3.39
5/6/2016	\$3.39
5/9/2016	\$3.39
5/10/2016	\$3.39
5/11/2016	\$3.39
5/12/2016	\$3.39
5/13/2016	\$3.39
5/16/2016	\$3.39
5/17/2016	\$3.39
5/18/2016	\$3.39
5/19/2016	\$3.39
5/20/2016	\$3.39
5/23/2016	\$3.39
5/24/2016	\$3.39
5/25/2016	\$3.39
5/26/2016	\$3.39
5/27/2016	\$3.39
5/31/2016	\$3.39
6/1/2016	\$3.39
6/2/2016	\$3.39
6/3/2016	\$3.39
6/6/2016	\$3.39
6/7/2016	\$3.39
6/8/2016	\$3.39
6/9/2016	\$3.39
6/10/2016	\$3.39
6/13/2016	\$3.39
6/14/2016	\$3.39
6/15/2016	\$3.39
6/16/2016	\$3.39
6/17/2016	\$3.39
6/20/2016	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
6/21/2016	\$3.39
6/22/2016	\$3.39
6/23/2016	\$3.39
6/24/2016	\$3.39
6/27/2016	\$3.39
6/28/2016	\$3.39
6/29/2016	\$3.39
6/30/2016	\$3.39
7/1/2016	\$3.39
7/5/2016	\$3.39
7/6/2016	\$3.39
7/7/2016	\$3.39
7/8/2016	\$3.39
7/11/2016	\$3.39
7/12/2016	\$3.39
7/13/2016	\$3.39
7/14/2016	\$3.39
7/15/2016	\$3.39
7/18/2016	\$3.39
7/19/2016	\$3.39
7/20/2016	\$3.39
7/21/2016	\$3.39
7/22/2016	\$3.39
7/25/2016	\$3.39
7/26/2016	\$3.39
7/27/2016	\$3.39
7/28/2016	\$3.39
7/29/2016	\$3.39
8/1/2016	\$3.39
8/2/2016	\$3.39
8/3/2016	\$3.39
8/4/2016	\$3.39
8/5/2016	\$3.39
8/8/2016	\$3.39
8/9/2016	\$3.39
8/10/2016	\$3.39
8/11/2016	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
8/12/2016	\$3.39
8/15/2016	\$3.39
8/16/2016	\$3.39
8/17/2016	\$3.39
8/18/2016	\$3.39
8/19/2016	\$3.39
8/22/2016	\$3.39
8/23/2016	\$3.39
8/24/2016	\$3.39
8/25/2016	\$3.39
8/26/2016	\$3.39
8/29/2016	\$3.39
8/30/2016	\$3.39
8/31/2016	\$3.39
9/1/2016	\$3.39
9/2/2016	\$3.39
9/6/2016	\$3.39
9/7/2016	\$3.39
9/8/2016	\$3.39
9/9/2016	\$3.39
9/12/2016	\$3.39
9/13/2016	\$3.39
9/14/2016	\$3.39
9/15/2016	\$3.39
9/16/2016	\$3.39
9/19/2016	\$3.39
9/20/2016	\$3.39
9/21/2016	\$3.39
9/22/2016	\$3.39
9/23/2016	\$3.39
9/26/2016	\$3.39
9/27/2016	\$3.39
9/28/2016	\$3.39
9/29/2016	\$3.39
9/30/2016	\$3.39
10/3/2016	\$3.39
10/4/2016	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
10/5/2016	\$3.39
10/6/2016	\$3.39
10/7/2016	\$3.39
10/10/2016	\$3.39
10/11/2016	\$3.39
10/12/2016	\$3.39
10/13/2016	\$3.39
10/14/2016	\$3.39
10/17/2016	\$3.39
10/18/2016	\$3.39
10/19/2016	\$3.39
10/20/2016	\$3.39
10/21/2016	\$3.39
10/24/2016	\$3.39
10/25/2016	\$3.39
10/26/2016	\$3.39
10/27/2016	\$3.39
10/28/2016	\$3.39
10/31/2016	\$3.39
11/1/2016	\$3.39
11/2/2016	\$3.39
11/3/2016	\$3.39
11/4/2016	\$3.39
11/7/2016	\$3.39
11/8/2016	\$3.39
11/9/2016	\$3.39
11/10/2016	\$3.39
11/11/2016	\$3.39
11/14/2016	\$3.39
11/15/2016	\$3.39
11/16/2016	\$3.39
11/17/2016	\$3.39
11/18/2016	\$3.39
11/21/2016	\$3.39
11/22/2016	\$3.39
11/23/2016	\$3.39
11/25/2016	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
11/28/2016	\$3.39
11/29/2016	\$3.39
11/30/2016	\$3.39
12/1/2016	\$3.39
12/2/2016	\$3.39
12/5/2016	\$3.39
12/6/2016	\$3.39
12/7/2016	\$3.39
12/8/2016	\$3.39
12/9/2016	\$3.39
12/12/2016	\$3.39
12/13/2016	\$3.39
12/14/2016	\$3.39
12/15/2016	\$3.39
12/16/2016	\$3.39
12/19/2016	\$3.39
12/20/2016	\$3.39
12/21/2016	\$3.39
12/22/2016	\$3.39
12/23/2016	\$3.39
12/27/2016	\$3.39
12/28/2016	\$3.39
12/29/2016	\$3.39
12/30/2016	\$3.39
1/3/2017	\$3.39
1/4/2017	\$3.39
1/5/2017	\$3.39
1/6/2017	\$3.39
1/9/2017	\$3.39
1/10/2017	\$3.39
1/11/2017	\$3.39
1/12/2017	\$3.39
1/13/2017	\$3.39
1/17/2017	\$3.39
1/18/2017	\$3.39
1/19/2017	\$3.39
1/20/2017	\$3.39

Exhibit-12**Artificial Inflation Ribbon
FXCM Inc. Common Stock**

Date	Inflation
1/23/2017	\$3.39
1/24/2017	\$3.39
1/25/2017	\$3.39
1/26/2017	\$3.39
1/27/2017	\$3.39
1/30/2017	\$3.39
1/31/2017	\$3.39
2/1/2017	\$3.39
2/2/2017	\$3.39
2/3/2017	\$3.39
2/6/2017	\$3.39
2/7/2017	-

Source: CRSP.

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
3/15/2012	\$16.31
3/16/2012	\$16.31
3/19/2012	\$16.31
3/20/2012	\$16.31
3/21/2012	\$16.31
3/22/2012	\$16.31
3/23/2012	\$16.31
3/26/2012	\$16.31
3/27/2012	\$16.31
3/28/2012	\$16.31
3/29/2012	\$16.31
3/30/2012	\$16.31
4/2/2012	\$16.31
4/3/2012	\$16.31
4/4/2012	\$16.31
4/5/2012	\$16.31
4/9/2012	\$16.31
4/10/2012	\$16.31
4/11/2012	\$16.31
4/12/2012	\$16.31
4/13/2012	\$16.31
4/16/2012	\$16.31
4/17/2012	\$16.31
4/18/2012	\$16.31
4/19/2012	\$16.31
4/20/2012	\$16.31
4/23/2012	\$16.31
4/24/2012	\$16.31
4/25/2012	\$16.31
4/26/2012	\$16.31
4/27/2012	\$16.31
4/30/2012	\$16.31
5/1/2012	\$16.31
5/2/2012	\$16.31
5/3/2012	\$16.31
5/4/2012	\$16.31
5/7/2012	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
5/8/2012	\$16.31
5/9/2012	\$16.31
5/10/2012	\$16.31
5/11/2012	\$16.31
5/14/2012	\$16.31
5/15/2012	\$16.31
5/16/2012	\$16.31
5/17/2012	\$16.31
5/18/2012	\$16.31
5/21/2012	\$16.31
5/22/2012	\$16.31
5/23/2012	\$16.31
5/24/2012	\$16.31
5/25/2012	\$16.31
5/29/2012	\$16.31
5/30/2012	\$16.31
5/31/2012	\$16.31
6/1/2012	\$16.31
6/4/2012	\$16.31
6/5/2012	\$16.31
6/6/2012	\$16.31
6/7/2012	\$16.31
6/8/2012	\$16.31
6/11/2012	\$16.31
6/12/2012	\$16.31
6/13/2012	\$16.31
6/14/2012	\$16.31
6/15/2012	\$16.31
6/18/2012	\$16.31
6/19/2012	\$16.31
6/20/2012	\$16.31
6/21/2012	\$16.31
6/22/2012	\$16.31
6/25/2012	\$16.31
6/26/2012	\$16.31
6/27/2012	\$16.31
6/28/2012	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
6/29/2012	\$16.31
7/2/2012	\$16.31
7/3/2012	\$16.31
7/5/2012	\$16.31
7/6/2012	\$16.31
7/9/2012	\$16.31
7/10/2012	\$16.31
7/11/2012	\$16.31
7/12/2012	\$16.31
7/13/2012	\$16.31
7/16/2012	\$16.31
7/17/2012	\$16.31
7/18/2012	\$16.31
7/19/2012	\$16.31
7/20/2012	\$16.31
7/23/2012	\$16.31
7/24/2012	\$16.31
7/25/2012	\$16.31
7/26/2012	\$16.31
7/27/2012	\$16.31
7/30/2012	\$16.31
7/31/2012	\$16.31
8/1/2012	\$16.31
8/2/2012	\$16.31
8/3/2012	\$16.31
8/6/2012	\$16.31
8/7/2012	\$16.31
8/8/2012	\$16.31
8/9/2012	\$16.31
8/10/2012	\$16.31
8/13/2012	\$16.31
8/14/2012	\$16.31
8/15/2012	\$16.31
8/16/2012	\$16.31
8/17/2012	\$16.31
8/20/2012	\$16.31
8/21/2012	\$16.31

Exhibit-13**Artificial Inflation Ribbon****FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
8/22/2012	\$16.31
8/23/2012	\$16.31
8/24/2012	\$16.31
8/27/2012	\$16.31
8/28/2012	\$16.31
8/29/2012	\$16.31
8/30/2012	\$16.31
8/31/2012	\$16.31
9/4/2012	\$16.31
9/5/2012	\$16.31
9/6/2012	\$16.31
9/7/2012	\$16.31
9/10/2012	\$16.31
9/11/2012	\$16.31
9/12/2012	\$16.31
9/13/2012	\$16.31
9/14/2012	\$16.31
9/17/2012	\$16.31
9/18/2012	\$16.31
9/19/2012	\$16.31
9/20/2012	\$16.31
9/21/2012	\$16.31
9/24/2012	\$16.31
9/25/2012	\$16.31
9/26/2012	\$16.31
9/27/2012	\$16.31
9/28/2012	\$16.31
10/1/2012	\$16.31
10/2/2012	\$16.31
10/3/2012	\$16.31
10/4/2012	\$16.31
10/5/2012	\$16.31
10/8/2012	\$16.31
10/9/2012	\$16.31
10/10/2012	\$16.31
10/11/2012	\$16.31
10/12/2012	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
10/15/2012	\$16.31
10/16/2012	\$16.31
10/17/2012	\$16.31
10/18/2012	\$16.31
10/19/2012	\$16.31
10/22/2012	\$16.31
10/23/2012	\$16.31
10/24/2012	\$16.31
10/25/2012	\$16.31
10/26/2012	\$16.31
10/31/2012	\$16.31
11/1/2012	\$16.31
11/2/2012	\$16.31
11/5/2012	\$16.31
11/6/2012	\$16.31
11/7/2012	\$16.31
11/8/2012	\$16.31
11/9/2012	\$16.31
11/12/2012	\$16.31
11/13/2012	\$16.31
11/14/2012	\$16.31
11/15/2012	\$16.31
11/16/2012	\$16.31
11/19/2012	\$16.31
11/20/2012	\$16.31
11/21/2012	\$16.31
11/23/2012	\$16.31
11/26/2012	\$16.31
11/27/2012	\$16.31
11/28/2012	\$16.31
11/29/2012	\$16.31
11/30/2012	\$16.31
12/3/2012	\$16.31
12/4/2012	\$16.31
12/5/2012	\$16.31
12/6/2012	\$16.31
12/7/2012	\$16.31

Exhibit-13**Artificial Inflation Ribbon****FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
12/10/2012	\$16.31
12/11/2012	\$16.31
12/12/2012	\$16.31
12/13/2012	\$16.31
12/14/2012	\$16.31
12/17/2012	\$16.31
12/18/2012	\$16.31
12/19/2012	\$16.31
12/20/2012	\$16.31
12/21/2012	\$16.31
12/24/2012	\$16.31
12/26/2012	\$16.31
12/27/2012	\$16.31
12/28/2012	\$16.31
12/31/2012	\$16.31
1/2/2013	\$16.31
1/3/2013	\$16.31
1/4/2013	\$16.31
1/7/2013	\$16.31
1/8/2013	\$16.31
1/9/2013	\$16.31
1/10/2013	\$16.31
1/11/2013	\$16.31
1/14/2013	\$16.31
1/15/2013	\$16.31
1/16/2013	\$16.31
1/17/2013	\$16.31
1/18/2013	\$16.31
1/22/2013	\$16.31
1/23/2013	\$16.31
1/24/2013	\$16.31
1/25/2013	\$16.31
1/28/2013	\$16.31
1/29/2013	\$16.31
1/30/2013	\$16.31
1/31/2013	\$16.31
2/1/2013	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
2/4/2013	\$16.31
2/5/2013	\$16.31
2/6/2013	\$16.31
2/7/2013	\$16.31
2/8/2013	\$16.31
2/11/2013	\$16.31
2/12/2013	\$16.31
2/13/2013	\$16.31
2/14/2013	\$16.31
2/15/2013	\$16.31
2/19/2013	\$16.31
2/20/2013	\$16.31
2/21/2013	\$16.31
2/22/2013	\$16.31
2/25/2013	\$16.31
2/26/2013	\$16.31
2/27/2013	\$16.31
2/28/2013	\$16.31
3/1/2013	\$16.31
3/4/2013	\$16.31
3/5/2013	\$16.31
3/6/2013	\$16.31
3/7/2013	\$16.31
3/8/2013	\$16.31
3/11/2013	\$16.31
3/12/2013	\$16.31
3/13/2013	\$16.31
3/14/2013	\$16.31
3/15/2013	\$16.31
3/18/2013	\$16.31
3/19/2013	\$16.31
3/20/2013	\$16.31
3/21/2013	\$16.31
3/22/2013	\$16.31
3/25/2013	\$16.31
3/26/2013	\$16.31
3/27/2013	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
3/28/2013	\$16.31
4/1/2013	\$16.31
4/2/2013	\$16.31
4/3/2013	\$16.31
4/4/2013	\$16.31
4/5/2013	\$16.31
4/8/2013	\$16.31
4/9/2013	\$16.31
4/10/2013	\$16.31
4/11/2013	\$16.31
4/12/2013	\$16.31
4/15/2013	\$16.31
4/16/2013	\$16.31
4/17/2013	\$16.31
4/18/2013	\$16.31
4/19/2013	\$16.31
4/22/2013	\$16.31
4/23/2013	\$16.31
4/24/2013	\$16.31
4/25/2013	\$16.31
4/26/2013	\$16.31
4/29/2013	\$16.31
4/30/2013	\$16.31
5/1/2013	\$16.31
5/2/2013	\$16.31
5/3/2013	\$16.31
5/6/2013	\$16.31
5/7/2013	\$16.31
5/8/2013	\$16.31
5/9/2013	\$16.31
5/10/2013	\$16.31
5/13/2013	\$16.31
5/14/2013	\$16.31
5/15/2013	\$16.31
5/16/2013	\$16.31
5/17/2013	\$16.31
5/20/2013	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
5/21/2013	\$16.31
5/22/2013	\$16.31
5/23/2013	\$16.31
5/24/2013	\$16.31
5/28/2013	\$16.31
5/29/2013	\$16.31
5/30/2013	\$16.31
5/31/2013	\$16.31
6/3/2013	\$16.31
6/4/2013	\$16.31
6/5/2013	\$16.31
6/6/2013	\$16.31
6/7/2013	\$16.31
6/10/2013	\$16.31
6/11/2013	\$16.31
6/12/2013	\$16.31
6/13/2013	\$16.31
6/14/2013	\$16.31
6/17/2013	\$16.31
6/18/2013	\$16.31
6/19/2013	\$16.31
6/20/2013	\$16.31
6/21/2013	\$16.31
6/24/2013	\$16.31
6/25/2013	\$16.31
6/26/2013	\$16.31
6/27/2013	\$16.31
6/28/2013	\$16.31
7/1/2013	\$16.31
7/2/2013	\$16.31
7/3/2013	\$16.31
7/5/2013	\$16.31
7/8/2013	\$16.31
7/9/2013	\$16.31
7/10/2013	\$16.31
7/11/2013	\$16.31
7/12/2013	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
7/15/2013	\$16.31
7/16/2013	\$16.31
7/17/2013	\$16.31
7/18/2013	\$16.31
7/19/2013	\$16.31
7/22/2013	\$16.31
7/23/2013	\$16.31
7/24/2013	\$16.31
7/25/2013	\$16.31
7/26/2013	\$16.31
7/29/2013	\$16.31
7/30/2013	\$16.31
7/31/2013	\$16.31
8/1/2013	\$16.31
8/2/2013	\$16.31
8/5/2013	\$16.31
8/6/2013	\$16.31
8/7/2013	\$16.31
8/8/2013	\$16.31
8/9/2013	\$16.31
8/12/2013	\$16.31
8/13/2013	\$16.31
8/14/2013	\$16.31
8/15/2013	\$16.31
8/16/2013	\$16.31
8/19/2013	\$16.31
8/20/2013	\$16.31
8/21/2013	\$16.31
8/22/2013	\$16.31
8/23/2013	\$16.31
8/26/2013	\$16.31
8/27/2013	\$16.31
8/28/2013	\$16.31
8/29/2013	\$16.31
8/30/2013	\$16.31
9/3/2013	\$16.31
9/4/2013	\$16.31

Exhibit-13**Artificial Inflation Ribbon****FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
9/5/2013	\$16.31
9/6/2013	\$16.31
9/9/2013	\$16.31
9/10/2013	\$16.31
9/11/2013	\$16.31
9/12/2013	\$16.31
9/13/2013	\$16.31
9/16/2013	\$16.31
9/17/2013	\$16.31
9/18/2013	\$16.31
9/19/2013	\$16.31
9/20/2013	\$16.31
9/23/2013	\$16.31
9/24/2013	\$16.31
9/25/2013	\$16.31
9/26/2013	\$16.31
9/27/2013	\$16.31
9/30/2013	\$16.31
10/1/2013	\$16.31
10/2/2013	\$16.31
10/3/2013	\$16.31
10/4/2013	\$16.31
10/7/2013	\$16.31
10/8/2013	\$16.31
10/9/2013	\$16.31
10/10/2013	\$16.31
10/11/2013	\$16.31
10/14/2013	\$16.31
10/15/2013	\$16.31
10/16/2013	\$16.31
10/17/2013	\$16.31
10/18/2013	\$16.31
10/21/2013	\$16.31
10/22/2013	\$16.31
10/23/2013	\$16.31
10/24/2013	\$16.31
10/25/2013	\$16.31

Exhibit-13**Artificial Inflation Ribbon****FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
10/28/2013	\$16.31
10/29/2013	\$16.31
10/30/2013	\$16.31
10/31/2013	\$16.31
11/1/2013	\$16.31
11/4/2013	\$16.31
11/5/2013	\$16.31
11/6/2013	\$16.31
11/7/2013	\$16.31
11/8/2013	\$16.31
11/11/2013	\$16.31
11/12/2013	\$16.31
11/13/2013	\$16.31
11/14/2013	\$16.31
11/15/2013	\$16.31
11/18/2013	\$16.31
11/19/2013	\$16.31
11/20/2013	\$16.31
11/21/2013	\$16.31
11/22/2013	\$16.31
11/25/2013	\$16.31
11/26/2013	\$16.31
11/27/2013	\$16.31
11/29/2013	\$16.31
12/2/2013	\$16.31
12/3/2013	\$16.31
12/4/2013	\$16.31
12/5/2013	\$16.31
12/6/2013	\$16.31
12/9/2013	\$16.31
12/10/2013	\$16.31
12/11/2013	\$16.31
12/12/2013	\$16.31
12/13/2013	\$16.31
12/16/2013	\$16.31
12/17/2013	\$16.31
12/18/2013	\$16.31

Exhibit-13**Artificial Inflation Ribbon****FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
12/19/2013	\$16.31
12/20/2013	\$16.31
12/23/2013	\$16.31
12/24/2013	\$16.31
12/26/2013	\$16.31
12/27/2013	\$16.31
12/30/2013	\$16.31
12/31/2013	\$16.31
1/2/2014	\$16.31
1/3/2014	\$16.31
1/6/2014	\$16.31
1/7/2014	\$16.31
1/8/2014	\$16.31
1/9/2014	\$16.31
1/10/2014	\$16.31
1/13/2014	\$16.31
1/14/2014	\$16.31
1/15/2014	\$16.31
1/16/2014	\$16.31
1/17/2014	\$16.31
1/21/2014	\$16.31
1/22/2014	\$16.31
1/23/2014	\$16.31
1/24/2014	\$16.31
1/27/2014	\$16.31
1/28/2014	\$16.31
1/29/2014	\$16.31
1/30/2014	\$16.31
1/31/2014	\$16.31
2/3/2014	\$16.31
2/4/2014	\$16.31
2/5/2014	\$16.31
2/6/2014	\$16.31
2/7/2014	\$16.31
2/10/2014	\$16.31
2/11/2014	\$16.31
2/12/2014	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
2/13/2014	\$16.31
2/14/2014	\$16.31
2/18/2014	\$16.31
2/19/2014	\$16.31
2/20/2014	\$16.31
2/21/2014	\$16.31
2/24/2014	\$16.31
2/25/2014	\$16.31
2/26/2014	\$16.31
2/27/2014	\$16.31
2/28/2014	\$16.31
3/3/2014	\$16.31
3/4/2014	\$16.31
3/5/2014	\$16.31
3/6/2014	\$16.31
3/7/2014	\$16.31
3/10/2014	\$16.31
3/11/2014	\$16.31
3/12/2014	\$16.31
3/13/2014	\$16.31
3/14/2014	\$16.31
3/17/2014	\$16.31
3/18/2014	\$16.31
3/19/2014	\$16.31
3/20/2014	\$16.31
3/21/2014	\$16.31
3/24/2014	\$16.31
3/25/2014	\$16.31
3/26/2014	\$16.31
3/27/2014	\$16.31
3/28/2014	\$16.31
3/31/2014	\$16.31
4/1/2014	\$16.31
4/2/2014	\$16.31
4/3/2014	\$16.31
4/4/2014	\$16.31
4/7/2014	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
4/8/2014	\$16.31
4/9/2014	\$16.31
4/10/2014	\$16.31
4/11/2014	\$16.31
4/14/2014	\$16.31
4/15/2014	\$16.31
4/16/2014	\$16.31
4/17/2014	\$16.31
4/21/2014	\$16.31
4/22/2014	\$16.31
4/23/2014	\$16.31
4/24/2014	\$16.31
4/25/2014	\$16.31
4/28/2014	\$16.31
4/29/2014	\$16.31
4/30/2014	\$16.31
5/1/2014	\$16.31
5/2/2014	\$16.31
5/5/2014	\$16.31
5/6/2014	\$16.31
5/7/2014	\$16.31
5/8/2014	\$16.31
5/9/2014	\$16.31
5/12/2014	\$16.31
5/13/2014	\$16.31
5/14/2014	\$16.31
5/15/2014	\$16.31
5/16/2014	\$16.31
5/19/2014	\$16.31
5/20/2014	\$16.31
5/21/2014	\$16.31
5/22/2014	\$16.31
5/23/2014	\$16.31
5/27/2014	\$16.31
5/28/2014	\$16.31
5/29/2014	\$16.31
5/30/2014	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
6/2/2014	\$16.31
6/3/2014	\$16.31
6/4/2014	\$16.31
6/5/2014	\$16.31
6/6/2014	\$16.31
6/9/2014	\$16.31
6/10/2014	\$16.31
6/11/2014	\$16.31
6/12/2014	\$16.31
6/13/2014	\$16.31
6/16/2014	\$16.31
6/17/2014	\$16.31
6/18/2014	\$16.31
6/19/2014	\$16.31
6/20/2014	\$16.31
6/23/2014	\$16.31
6/24/2014	\$16.31
6/25/2014	\$16.31
6/26/2014	\$16.31
6/27/2014	\$16.31
6/30/2014	\$16.31
7/1/2014	\$16.31
7/2/2014	\$16.31
7/3/2014	\$16.31
7/7/2014	\$16.31
7/8/2014	\$16.31
7/9/2014	\$16.31
7/10/2014	\$16.31
7/11/2014	\$16.31
7/14/2014	\$16.31
7/15/2014	\$16.31
7/16/2014	\$16.31
7/17/2014	\$16.31
7/18/2014	\$16.31
7/21/2014	\$16.31
7/22/2014	\$16.31
7/23/2014	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
7/24/2014	\$16.31
7/25/2014	\$16.31
7/28/2014	\$16.31
7/29/2014	\$16.31
7/30/2014	\$16.31
7/31/2014	\$16.31
8/1/2014	\$16.31
8/4/2014	\$16.31
8/5/2014	\$16.31
8/6/2014	\$16.31
8/7/2014	\$16.31
8/8/2014	\$16.31
8/11/2014	\$16.31
8/12/2014	\$16.31
8/13/2014	\$16.31
8/14/2014	\$16.31
8/15/2014	\$16.31
8/18/2014	\$16.31
8/19/2014	\$16.31
8/20/2014	\$16.31
8/21/2014	\$16.31
8/22/2014	\$16.31
8/25/2014	\$16.31
8/26/2014	\$16.31
8/27/2014	\$16.31
8/28/2014	\$16.31
8/29/2014	\$16.31
9/2/2014	\$16.31
9/3/2014	\$16.31
9/4/2014	\$16.31
9/5/2014	\$16.31
9/8/2014	\$16.31
9/9/2014	\$16.31
9/10/2014	\$16.31
9/11/2014	\$16.31
9/12/2014	\$16.31
9/15/2014	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
9/16/2014	\$16.31
9/17/2014	\$16.31
9/18/2014	\$16.31
9/19/2014	\$16.31
9/22/2014	\$16.31
9/23/2014	\$16.31
9/24/2014	\$16.31
9/25/2014	\$16.31
9/26/2014	\$16.31
9/29/2014	\$16.31
9/30/2014	\$16.31
10/1/2014	\$16.31
10/2/2014	\$16.31
10/3/2014	\$16.31
10/6/2014	\$16.31
10/7/2014	\$16.31
10/8/2014	\$16.31
10/9/2014	\$16.31
10/10/2014	\$16.31
10/13/2014	\$16.31
10/14/2014	\$16.31
10/15/2014	\$16.31
10/16/2014	\$16.31
10/17/2014	\$16.31
10/20/2014	\$16.31
10/21/2014	\$16.31
10/22/2014	\$16.31
10/23/2014	\$16.31
10/24/2014	\$16.31
10/27/2014	\$16.31
10/28/2014	\$16.31
10/29/2014	\$16.31
10/30/2014	\$16.31
10/31/2014	\$16.31
11/3/2014	\$16.31
11/4/2014	\$16.31
11/5/2014	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
11/6/2014	\$16.31
11/7/2014	\$16.31
11/10/2014	\$16.31
11/11/2014	\$16.31
11/12/2014	\$16.31
11/13/2014	\$16.31
11/14/2014	\$16.31
11/17/2014	\$16.31
11/18/2014	\$16.31
11/19/2014	\$16.31
11/20/2014	\$16.31
11/21/2014	\$16.31
11/24/2014	\$16.31
11/25/2014	\$16.31
11/26/2014	\$16.31
11/28/2014	\$16.31
12/1/2014	\$16.31
12/2/2014	\$16.31
12/3/2014	\$16.31
12/4/2014	\$16.31
12/5/2014	\$16.31
12/8/2014	\$16.31
12/9/2014	\$16.31
12/10/2014	\$16.31
12/11/2014	\$16.31
12/12/2014	\$16.31
12/15/2014	\$16.31
12/16/2014	\$16.31
12/17/2014	\$16.31
12/18/2014	\$16.31
12/19/2014	\$16.31
12/22/2014	\$16.31
12/23/2014	\$16.31
12/24/2014	\$16.31
12/26/2014	\$16.31
12/29/2014	\$16.31
12/30/2014	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
12/31/2014	\$16.31
1/2/2015	\$16.31
1/5/2015	\$16.31
1/6/2015	\$16.31
1/7/2015	\$16.31
1/8/2015	\$16.31
1/9/2015	\$16.31
1/12/2015	\$16.31
1/13/2015	\$16.31
1/14/2015	\$16.31
1/15/2015	\$16.31
1/16/2015	\$16.31
1/20/2015	\$16.31
1/21/2015	\$16.31
1/22/2015	\$16.31
1/23/2015	\$16.31
1/26/2015	\$16.31
1/27/2015	\$16.31
1/28/2015	\$16.31
1/29/2015	\$16.31
1/30/2015	\$16.31
2/2/2015	\$16.31
2/3/2015	\$16.31
2/4/2015	\$16.31
2/5/2015	\$16.31
2/6/2015	\$16.31
2/9/2015	\$16.31
2/10/2015	\$16.31
2/11/2015	\$16.31
2/12/2015	\$16.31
2/13/2015	\$16.31
2/17/2015	\$16.31
2/18/2015	\$16.31
2/19/2015	\$16.31
2/20/2015	\$16.31
2/23/2015	\$16.31
2/24/2015	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
2/25/2015	\$16.31
2/26/2015	\$16.31
2/27/2015	\$16.31
3/2/2015	\$16.31
3/3/2015	\$16.31
3/4/2015	\$16.31
3/5/2015	\$16.31
3/6/2015	\$16.31
3/9/2015	\$16.31
3/10/2015	\$16.31
3/11/2015	\$16.31
3/12/2015	\$16.31
3/13/2015	\$16.31
3/16/2015	\$16.31
3/17/2015	\$16.31
3/18/2015	\$16.31
3/19/2015	\$16.31
3/20/2015	\$16.31
3/23/2015	\$16.31
3/24/2015	\$16.31
3/25/2015	\$16.31
3/26/2015	\$16.31
3/27/2015	\$16.31
3/30/2015	\$16.31
3/31/2015	\$16.31
4/1/2015	\$16.31
4/2/2015	\$16.31
4/6/2015	\$16.31
4/7/2015	\$16.31
4/8/2015	\$16.31
4/9/2015	\$16.31
4/10/2015	\$16.31
4/13/2015	\$16.31
4/14/2015	\$16.31
4/15/2015	\$16.31
4/16/2015	\$16.31
4/17/2015	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
4/20/2015	\$16.31
4/21/2015	\$16.31
4/22/2015	\$16.31
4/23/2015	\$16.31
4/24/2015	\$16.31
4/27/2015	\$16.31
4/28/2015	\$16.31
4/29/2015	\$16.31
4/30/2015	\$16.31
5/1/2015	\$16.31
5/4/2015	\$16.31
5/5/2015	\$16.31
5/6/2015	\$16.31
5/7/2015	\$16.31
5/8/2015	\$16.31
5/11/2015	\$16.31
5/12/2015	\$16.31
5/13/2015	\$16.31
5/14/2015	\$16.31
5/15/2015	\$16.31
5/18/2015	\$16.31
5/19/2015	\$16.31
5/20/2015	\$16.31
5/21/2015	\$16.31
5/22/2015	\$16.31
5/26/2015	\$16.31
5/27/2015	\$16.31
5/28/2015	\$16.31
5/29/2015	\$16.31
6/1/2015	\$16.31
6/2/2015	\$16.31
6/3/2015	\$16.31
6/4/2015	\$16.31
6/5/2015	\$16.31
6/8/2015	\$16.31
6/9/2015	\$16.31
6/10/2015	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
6/11/2015	\$16.31
6/12/2015	\$16.31
6/15/2015	\$16.31
6/16/2015	\$16.31
6/17/2015	\$16.31
6/18/2015	\$16.31
6/19/2015	\$16.31
6/22/2015	\$16.31
6/23/2015	\$16.31
6/24/2015	\$16.31
6/25/2015	\$16.31
6/26/2015	\$16.31
6/29/2015	\$16.31
6/30/2015	\$16.31
7/1/2015	\$16.31
7/2/2015	\$16.31
7/6/2015	\$16.31
7/7/2015	\$16.31
7/8/2015	\$16.31
7/9/2015	\$16.31
7/10/2015	\$16.31
7/13/2015	\$16.31
7/14/2015	\$16.31
7/15/2015	\$16.31
7/16/2015	\$16.31
7/17/2015	\$16.31
7/20/2015	\$16.31
7/21/2015	\$16.31
7/22/2015	\$16.31
7/23/2015	\$16.31
7/24/2015	\$16.31
7/27/2015	\$16.31
7/28/2015	\$16.31
7/29/2015	\$16.31
7/30/2015	\$16.31
7/31/2015	\$16.31
8/3/2015	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
8/4/2015	\$16.31
8/5/2015	\$16.31
8/6/2015	\$16.31
8/7/2015	\$16.31
8/10/2015	\$16.31
8/11/2015	\$16.31
8/12/2015	\$16.31
8/13/2015	\$16.31
8/14/2015	\$16.31
8/17/2015	\$16.31
8/18/2015	\$16.31
8/19/2015	\$16.31
8/20/2015	\$16.31
8/21/2015	\$16.31
8/24/2015	\$16.31
8/25/2015	\$16.31
8/26/2015	\$16.31
8/27/2015	\$16.31
8/28/2015	\$16.31
8/31/2015	\$16.31
9/1/2015	\$16.31
9/2/2015	\$16.31
9/3/2015	\$16.31
9/4/2015	\$16.31
9/8/2015	\$16.31
9/9/2015	\$16.31
9/10/2015	\$16.31
9/11/2015	\$16.31
9/14/2015	\$16.31
9/15/2015	\$16.31
9/16/2015	\$16.31
9/17/2015	\$16.31
9/18/2015	\$16.31
9/21/2015	\$16.31
9/22/2015	\$16.31
9/23/2015	\$16.31
9/24/2015	\$16.31

Exhibit-13**Artificial Inflation Ribbon****FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
9/25/2015	\$16.31
9/28/2015	\$16.31
9/29/2015	\$16.31
9/30/2015	\$16.31
10/1/2015	\$16.31
10/2/2015	\$16.31
10/5/2015	\$16.31
10/6/2015	\$16.31
10/7/2015	\$16.31
10/8/2015	\$16.31
10/9/2015	\$16.31
10/12/2015	\$16.31
10/13/2015	\$16.31
10/14/2015	\$16.31
10/15/2015	\$16.31
10/16/2015	\$16.31
10/19/2015	\$16.31
10/20/2015	\$16.31
10/21/2015	\$16.31
10/22/2015	\$16.31
10/23/2015	\$16.31
10/26/2015	\$16.31
10/27/2015	\$16.31
10/28/2015	\$16.31
10/29/2015	\$16.31
10/30/2015	\$16.31
11/2/2015	\$16.31
11/3/2015	\$16.31
11/4/2015	\$16.31
11/5/2015	\$16.31
11/6/2015	\$16.31
11/9/2015	\$16.31
11/10/2015	\$16.31
11/11/2015	\$16.31
11/12/2015	\$16.31
11/13/2015	\$16.31
11/16/2015	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
11/17/2015	\$16.31
11/18/2015	\$16.31
11/19/2015	\$16.31
11/20/2015	\$16.31
11/23/2015	\$16.31
11/24/2015	\$16.31
11/25/2015	\$16.31
11/27/2015	\$16.31
11/30/2015	\$16.31
12/1/2015	\$16.31
12/2/2015	\$16.31
12/3/2015	\$16.31
12/4/2015	\$16.31
12/7/2015	\$16.31
12/8/2015	\$16.31
12/9/2015	\$16.31
12/10/2015	\$16.31
12/11/2015	\$16.31
12/14/2015	\$16.31
12/15/2015	\$16.31
12/16/2015	\$16.31
12/17/2015	\$16.31
12/18/2015	\$16.31
12/21/2015	\$16.31
12/22/2015	\$16.31
12/23/2015	\$16.31
12/24/2015	\$16.31
12/28/2015	\$16.31
12/29/2015	\$16.31
12/30/2015	\$16.31
12/31/2015	\$16.31
1/4/2016	\$16.31
1/5/2016	\$16.31
1/6/2016	\$16.31
1/7/2016	\$16.31
1/8/2016	\$16.31
1/11/2016	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
1/12/2016	\$16.31
1/13/2016	\$16.31
1/14/2016	\$16.31
1/15/2016	\$16.31
1/19/2016	\$16.31
1/20/2016	\$16.31
1/21/2016	\$16.31
1/22/2016	\$16.31
1/25/2016	\$16.31
1/26/2016	\$16.31
1/27/2016	\$16.31
1/28/2016	\$16.31
1/29/2016	\$16.31
2/1/2016	\$16.31
2/2/2016	\$16.31
2/3/2016	\$16.31
2/4/2016	\$16.31
2/5/2016	\$16.31
2/8/2016	\$16.31
2/9/2016	\$16.31
2/10/2016	\$16.31
2/11/2016	\$16.31
2/12/2016	\$16.31
2/16/2016	\$16.31
2/17/2016	\$16.31
2/18/2016	\$16.31
2/19/2016	\$16.31
2/22/2016	\$16.31
2/23/2016	\$16.31
2/24/2016	\$16.31
2/25/2016	\$16.31
2/26/2016	\$16.31
2/29/2016	\$16.31
3/1/2016	\$16.31
3/2/2016	\$16.31
3/3/2016	\$16.31
3/4/2016	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
3/7/2016	\$16.31
3/8/2016	\$16.31
3/9/2016	\$16.31
3/10/2016	\$16.31
3/11/2016	\$16.31
3/14/2016	\$16.31
3/15/2016	\$16.31
3/16/2016	\$16.31
3/17/2016	\$16.31
3/18/2016	\$16.31
3/21/2016	\$16.31
3/22/2016	\$16.31
3/23/2016	\$16.31
3/24/2016	\$16.31
3/28/2016	\$16.31
3/29/2016	\$16.31
3/30/2016	\$16.31
3/31/2016	\$16.31
4/1/2016	\$16.31
4/4/2016	\$16.31
4/5/2016	\$16.31
4/6/2016	\$16.31
4/7/2016	\$16.31
4/8/2016	\$16.31
4/11/2016	\$16.31
4/12/2016	\$16.31
4/13/2016	\$16.31
4/14/2016	\$16.31
4/15/2016	\$16.31
4/18/2016	\$16.31
4/19/2016	\$16.31
4/20/2016	\$16.31
4/21/2016	\$16.31
4/22/2016	\$16.31
4/25/2016	\$16.31
4/26/2016	\$16.31
4/27/2016	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
4/28/2016	\$16.31
4/29/2016	\$16.31
5/2/2016	\$16.31
5/3/2016	\$16.31
5/4/2016	\$16.31
5/5/2016	\$16.31
5/6/2016	\$16.31
5/9/2016	\$16.31
5/10/2016	\$16.31
5/11/2016	\$16.31
5/12/2016	\$16.31
5/13/2016	\$16.31
5/16/2016	\$16.31
5/17/2016	\$16.31
5/18/2016	\$16.31
5/19/2016	\$16.31
5/20/2016	\$16.31
5/23/2016	\$16.31
5/24/2016	\$16.31
5/25/2016	\$16.31
5/26/2016	\$16.31
5/27/2016	\$16.31
5/31/2016	\$16.31
6/1/2016	\$16.31
6/2/2016	\$16.31
6/3/2016	\$16.31
6/6/2016	\$16.31
6/7/2016	\$16.31
6/8/2016	\$16.31
6/9/2016	\$16.31
6/10/2016	\$16.31
6/13/2016	\$16.31
6/14/2016	\$16.31
6/15/2016	\$16.31
6/16/2016	\$16.31
6/17/2016	\$16.31
6/20/2016	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
6/21/2016	\$16.31
6/22/2016	\$16.31
6/23/2016	\$16.31
6/24/2016	\$16.31
6/27/2016	\$16.31
6/28/2016	\$16.31
6/29/2016	\$16.31
6/30/2016	\$16.31
7/1/2016	\$16.31
7/5/2016	\$16.31
7/6/2016	\$16.31
7/7/2016	\$16.31
7/8/2016	\$16.31
7/11/2016	\$16.31
7/12/2016	\$16.31
7/13/2016	\$16.31
7/14/2016	\$16.31
7/15/2016	\$16.31
7/18/2016	\$16.31
7/19/2016	\$16.31
7/20/2016	\$16.31
7/21/2016	\$16.31
7/22/2016	\$16.31
7/25/2016	\$16.31
7/26/2016	\$16.31
7/27/2016	\$16.31
7/28/2016	\$16.31
7/29/2016	\$16.31
8/1/2016	\$16.31
8/2/2016	\$16.31
8/3/2016	\$16.31
8/4/2016	\$16.31
8/5/2016	\$16.31
8/8/2016	\$16.31
8/9/2016	\$16.31
8/10/2016	\$16.31
8/11/2016	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
8/12/2016	\$16.31
8/15/2016	\$16.31
8/16/2016	\$16.31
8/17/2016	\$16.31
8/18/2016	\$16.31
8/19/2016	\$16.31
8/22/2016	\$16.31
8/23/2016	\$16.31
8/24/2016	\$16.31
8/25/2016	\$16.31
8/26/2016	\$16.31
8/29/2016	\$16.31
8/30/2016	\$16.31
8/31/2016	\$16.31
9/1/2016	\$16.31
9/2/2016	\$16.31
9/6/2016	\$16.31
9/7/2016	\$16.31
9/8/2016	\$16.31
9/9/2016	\$16.31
9/12/2016	\$16.31
9/13/2016	\$16.31
9/14/2016	\$16.31
9/15/2016	\$16.31
9/16/2016	\$16.31
9/19/2016	\$16.31
9/20/2016	\$16.31
9/21/2016	\$16.31
9/22/2016	\$16.31
9/23/2016	\$16.31
9/26/2016	\$16.31
9/27/2016	\$16.31
9/28/2016	\$16.31
9/29/2016	\$16.31
9/30/2016	\$16.31
10/3/2016	\$16.31
10/4/2016	\$16.31

Exhibit-13**Artificial Inflation Ribbon****FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
10/5/2016	\$16.31
10/6/2016	\$16.31
10/7/2016	\$16.31
10/10/2016	\$16.31
10/11/2016	\$16.31
10/12/2016	\$16.31
10/13/2016	\$16.31
10/14/2016	\$16.31
10/17/2016	\$16.31
10/18/2016	\$16.31
10/19/2016	\$16.31
10/20/2016	\$16.31
10/21/2016	\$16.31
10/24/2016	\$16.31
10/25/2016	\$16.31
10/26/2016	\$16.31
10/27/2016	\$16.31
10/28/2016	\$16.31
10/31/2016	\$16.31
11/1/2016	\$16.31
11/2/2016	\$16.31
11/3/2016	\$16.31
11/4/2016	\$16.31
11/7/2016	\$16.31
11/8/2016	\$16.31
11/9/2016	\$16.31
11/10/2016	\$16.31
11/11/2016	\$16.31
11/14/2016	\$16.31
11/15/2016	\$16.31
11/16/2016	\$16.31
11/17/2016	\$16.31
11/18/2016	\$16.31
11/21/2016	\$16.31
11/22/2016	\$16.31
11/23/2016	\$16.31
11/25/2016	\$16.31

Exhibit-13**Artificial Inflation Ribbon****FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
11/28/2016	\$16.31
11/29/2016	\$16.31
11/30/2016	\$16.31
12/1/2016	\$16.31
12/2/2016	\$16.31
12/5/2016	\$16.31
12/6/2016	\$16.31
12/7/2016	\$16.31
12/8/2016	\$16.31
12/9/2016	\$16.31
12/12/2016	\$16.31
12/13/2016	\$16.31
12/14/2016	\$16.31
12/15/2016	\$16.31
12/16/2016	\$16.31
12/19/2016	\$16.31
12/20/2016	\$16.31
12/21/2016	\$16.31
12/22/2016	\$16.31
12/23/2016	\$16.31
12/27/2016	\$16.31
12/28/2016	\$16.31
12/29/2016	\$16.31
12/30/2016	\$16.31
1/3/2017	\$16.31
1/4/2017	\$16.31
1/5/2017	\$16.31
1/6/2017	\$16.31
1/9/2017	\$16.31
1/10/2017	\$16.31
1/11/2017	\$16.31
1/12/2017	\$16.31
1/13/2017	\$16.31
1/17/2017	\$16.31
1/18/2017	\$16.31
1/19/2017	\$16.31
1/20/2017	\$16.31

Exhibit-13**Artificial Inflation Ribbon
FXCM Inc. Notes**

Date	Inflation Per \$100 of Par
1/23/2017	\$16.31
1/24/2017	\$16.31
1/25/2017	\$16.31
1/26/2017	\$16.31
1/27/2017	\$16.31
1/30/2017	\$16.31
1/31/2017	\$16.31
2/1/2017	\$16.31
2/2/2017	\$16.31
2/3/2017	\$16.31
2/6/2017	\$16.31
2/7/2017	-

Source: CRSP.